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ABSTRACT

A five-year study was undertaken to investigate the relative effectiveness of pre-retirement education (PRE) programs. Project staff identified for study three methodologies (the lecture series, the discussion group, and the "facilitated interaction" model) and four contexts for sponsor-settings (the employer, the education, the community agency, and the social organization and volunteer contexts). The central research question addressed was: What are the most feasible and constructive treatment and setting combinations vis-a-vis PRE? Staff recruited and trained PRE leaders who then mounted programs in their home communities within project guidelines. Staff monitored and supported the leaders while also collecting data from PRE participants. An integrated package of adjustments was applied after the first program/data cycle. The relative effectiveness of the three educational methodologies was examined using multiple-regression analysis to develop comparisons. Discussion and results were grouped into four self-sufficient, yet interrelated papers, each of which is appended to this report: (1) In "The Study Subjects," accumulated data are combined for detailed analysis and breakdown by demographic categories and data obtained via the (appended) Retirement Preparation Indexes (RPI); (2) "Issues in Nomenclature and Methodology" attempts to sort out terms used in the discussion of delivery systems for PRE; and (3) the "Study of Selected Demographic Variables and the RPI" organizes questions around three components: behavior, attitude, and information. (CP)

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A RESEARCH STUDY
OF
RETIREMENT PREPARATION PROGRAMS

by

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TABLE OF CONTENTS

page

Report to Grantor (included in official grantor copies only). . . . 1-19

Project Staff 22

Region X Program Leaders 23

Background and Foundations of the Study

Appendix A-1: Overview of the Study 24

Appendix A-2: The Study Subjects 40

The Central Treatment-Effects Study

Appendix B-1: Three Educational Methodologies in Pre-Retirement Planning Programs: A Study of Relative Effectiveness 58

Supporting Materials

Appendix C-1: James H. Lynch. Pre-Retirement Education: Issues in Nomenclature and Methodology 120

Appendix C-2: William F. Price. Retirement Preparation: A Study of Selected Demographic Variables and the "Retirement Preparation Indexes" 146

Appendix C-3: Data-Collection Instruments 167

Summary Statement on Dissemination of Findings 203

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APPENDIX A-1

Project:
A Research Study of Retirement Preparation Programs
Grant No. 5 R01 MH 23949
National Institute of Mental Health
Grantee Institution:
University of Oregon
College of Health, Physical Education, and Recreation
University of Oregon Center for Gerontology
Principal Investigator: Frances G. Scott, PhD.
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Overview of the Study

Frances G. Scott, PhD.
James H. Lynch, PhD.

Purposes of the Research

It was the general purpose of the study to investigate the relative effectiveness of pre-retirement education programs. Two general independent variables were at issue in the argument and hypotheses.

Treatment. Pre-retirement education programs appear in a variety of methodological dress; the study intended to investigate the relative effects of distinctly different educational methodologies, as they have come to be applied in this education. In the original conception, three such methodologies, or models, were identified for study:

> (1) The traditional lecture series, in which various subject-matter experts are arranged in a program of periodic presentations;
>
> (2) A structured discussion-group approach, utilizing prepared materials, case studies, audio-visual techniques, in what has since been called a conventional "stimulus/discussion" method;

(3) A facilitated interaction model for small groups, described as an "andragogical" adult education method emphasizing involvement and mutuality.

The research was motivated by the desire to demonstrate the value of principles embodied in the third type shown, a model based upon original work done at the University of Oregon by U. Vincent Manion, Frances G. Scott, and Donna M. McKenzie--and variously referred to by them in earlier materials as a structured T-group method or a group-counseling model.

As will be seen below, the definitions of treatment changed during the term of the study--in part under the influence of evolutionary factors in pre-retirement education generally, and, to an important degree, as a result of the innovation of a new approach during the progress of the study.

Sponsor-Setting. Programs evolve under various sponsorship interests and are carried out in diverse settings--community education settings, employer personnel units, senior-citizen programs, and so on. The study intended to investigate the relative utility of different sponsor-settings that are highly visible in, or relevant to, pre-retirement education. The original conception suggested four contexts in the community as having interests in the matter of preparing individuals for the retirement transition and life-stage. Translations of the four were entered into the original study design as viable sponsor-settings for programming.

(1) Employer Context: Certainly one of the most naturally interfaced interests, the context becomes directly involved via the dynamics of work-related retirement-benefits programs, the problems of older workers, and manpower planning needs. For this study, personnel administration units were seen as targets for the recruitment of potential program leaders.

(2) Education Context: Here exists a strong collection of interests in preparation for retirement: community colleges, especially, and adult-education programs find the issue a natural extension of their interests in lifelong learning, life-planning education, and other personal development programming. Now, too, they evidence strong fiscal reasons for looking to new programming among non-traditional clientele groups. For this study, it was expected that community colleges, continuing education units, and, in some cases, local public-school districts would provide candidates for training as program leaders.

(3) Community Agency Context: Though a variety of interests came to be considered under this heading, the original focus was upon community mental health agencies as agents for pre-retirement education. For the recruitment of program leaders, efforts concentrated on publicly and privately operated mental health organizations, as well as on well-established service agencies such as park-and-recreation departments.

(4) Social Organization and Volunteer Context: The potential sponsor-settings imagined here included churches, fraternal groups, volunteer organizations, and the like.

As was the case with the definitions of treatments, the work of the study naturally illuminated pre-conceptions about sponsorship interests and potential programming agents. As is discussed further on, the original classification of such interests proved unworkable. Again, adjustment responded to new understandings of viable programming channels (discussed in detail below).

General Structure and Chronology

In its most general aspect the proposed study asked what are the most feasible and constructive treatment/setting combinations vis-a-vis pre-retirement education. The original design intended to compare the implied alternative treatments, via the measurement of certain effects in individuals experiencing those treatments. The subjects of the study, then, were the pre-retirees who would be recruited into numerous pre-retirement education programs carried out under RSRPP guidelines throughout HEW Region X. Before and after treatment, questionnaire data from these participants would develop information regarding factors presumed to be related, first, to appropriate planning for retirement, and, second, to improved adjustment after retirement. These measurements of change in subjects would ultimately be used to compare the relative effects of the different educational methodologies being tested.

Within the full, five-year term of the study, three periods of data-development activity were envisioned, which together would exhaust the second, third, and fourth years. Each period would repeat a cycle of activities that involved the following major considerations.

(1) Recruitment, by project staff, of potential program leaders, representing the assorted sponsor-settings, for participation in the training and program-delivery activities required.

(2) The conduct of month-long training (once each cycle), within the structure of the University of Oregon Summer Session, for the recruited program leaders, to prepare them to deliver the defined education (treatments) in their respective settings.

(3) The on-going development of data-collection instrumentation and data-analysis models pertinent to the desired measurement of treatment effects.

(4) Monitoring, by project staff, of the respective programming activities of the leaders throughout HEW Region X.

(5) Collection of data by questionnaires among the "pre-retiree" participants in those programs throughout the study area.

Apart from any other activities or commitments implied or intended, this three-year core of activity served the central treatment-effects study, which constituted the project's principal mission. Following the usual developmental pursuits of the first year, the project opened the first training session for the treatment-effects study in the summer of 1975; similarly, training groups were conducted in the summers of 1976 and 1977. In the months following each training event, the involved program leaders attempted to mount pre-retirement programs in their home communities, via their respective sponsor-settings, under guidelines from the project. In each of these cycles, the project staff worked throughout the study area, supporting the leaders' efforts, monitoring their programs for methodological integrity, and formally collecting data from the pre-retiree participants in these programs. These central program/data activities were completed by the beginning of the project's final year, June 1, 1978, and the remaining period has been occupied with analysis, materials-production, dissemination, and report preparation.

Research Methodology

The original conception applied strict experimental principles to a field study that involved multiple treatments, multiple agents, and multiple sites. The resulting matrix, naturally, was extremely vulnerable. The measurement design was of the pretest-posttest/control-group type, using several measures of morale, adjustment, and satisfaction. Analysis was construed in a multiple-regression model for comparing gains. As is elaborated below, major adjustments were necessary to achieve a feasible, defensible methodology.

Progress, Problems, and Adjustments

Ultimately, within the central treatment-effects study, 43 pre-retirement education programs were delivered in 22 different communities throughout the region. Of the 35 leaders who completed training, 25 of them eventually delivered one or more programs. The foregoing sections have foreshadowed what became the most serious problems in realizing the research design: (1) the recruitment of potential program leaders; (2) the recruitment of leaders representing all of the pre-conceived sponsor-settings; (3) the durability of the two major independent-variable constructs, having to do with definitions of treatments and of sponsor-settings; (4) the ability of the leaders, once trained, to mount programs in their communities and settings, in order that the project could collect data among participants in large enough numbers to justify needed measurements; (5) the ability of the project to meet experimental design requirements sufficient to defend against erosion of validity (sampling, control groups, etc.). Problems in each of these matters did, in fact, demand major adjustments, as noted below.

Durability of the Independent Variable Constructs. The major challenge to the study has been that of realizing the independent variable constructs, for purposes of measurement. For example, achieving practical representation of the treatment construct required the following:

> (1) Full delineation of the various educational methodologies at issue, as distinct program models applied in pre-retirement education.
>
> (2) Sufficient recruitment of prospective program leaders, who could attend project training in the methodologies, and who could then develop and deliver programs uniformly in their respective sponsor-settings.
>
> (3) Satisfactory completion of the training by the recruited program leaders.
>
> (4) The delivery of several experimental pre-retirement education programs by the trained program leaders, which, in turn, depended upon their successful recruitment of participant groups for the programs.

In the case of the sponsor-setting variable, realization of the construct required the following:

(1) Accurate definition of sponsor-settings that in fact could become viable channels for the delivery of pre-retirement education.

(2) The ability of representatives of those settings to meet conditions and work within requirements related to the research design (see treatment conditions above).

Finally, the achievement of the treatment construct as prescribed in the assumptions of the research depended upon the realization of the sponsor-setting construct--since the pivotal matter of securing program leaders resided there.

a. Treatments.

Of the two central constructs of interest, the most durable has been the originally cast idea of distinct educational methodologies applied in pre-retirement education. Though the classification of methods has been elaborated and refined, basic views of methodological distinctions endure (Manion, 1976; Lynch, 1977; Tiberi, Boyack & Kerschner, 1978). Integrating other research and practical innovation in the field, the project gradually de-emphasized one of the originally targeted model concepts and added another. The intent here is only to define generally a classification of methods, as they were distinguished for comparison; the treatments involved are more essentially defined in Appendix B-1, which reports upon the central treatment-effects research. The study eventually collected data in 43 programs, each of which was classified as one of the following types.

1. Unstructured Informational (UI) Models: Traditional serial programs using guest lecturers and informal reading-discussion models were the variations observed. These models are allied in the present schema along the following lines:

(a) The process is segmented rather than developmental--that is, topics, issues, and so on are not consistently linked to an organizing principle (such as a planning model) that is set out in the beginning and returned to systematically as a developing definition of the subject under study;

(b) Participation of the audience is not structured or formally guided; indeed, in the case of the traditional presentation/audience types, it may be absent completely;

(c) Segmented content is tied to conventional informational techniques--such as the lecture in the presentation series, or the written material in the reading-discussion model.

The traditional lecture series needs no further definition. The reading-discussion model also depended upon serial meetings, organized around a sequence of readings; the method was applied among smaller groups--a group assembling once weekly to "discuss" the week's reading. Though rudimentary interaction among participants is obviously a feature of the method, the process was not guided or structured. Leaders served primarily as program coordinators, organizing the program events but not taking leadership of the meetings. Some programs included two small groups meeting simultaneously but independently. It is in the segmented nature of the process, especially, that methods here remain distinct from those in the remaining categories.

Unstructured informational models were followed only during the first two cycles of programming.

2. Facilitated Interaction (FI) Group: The method is defined as a "structured" process for a small group, actively led by a facilitator trained in the group-education techniques applied. The present study was, in fact, stimulated by innovations in this category at the University of Oregon beginning in 1969, and the theoretical and practical arguments that pertain were amply set out in the original proposal. Moreover, the concept has occupied a critical position in the recent history of pre-retirement education--especially as revealed in the results of its examination in other, similar research at the University of Southern California (Tiberi, Boyack and Kerschner, 1978). Important in both that and the present study was the belief that the leadership skills required could be transmitted via short-term training, to appropriate candidates from a diverse range of sites where pre-retirement education might be initiated.

The method served as a touchstone in the present study: It was the only one demonstrated in all three training events, and subsequently applied by leaders in all three cycles of programming.

3. Multi-Group (MG) Workshop: An important application innovated after the project's beginning, the multi-group workshop concept was integrated into the research interest in the second and third years of program/data activity. The concept extends certain philosophical principles, teaching techniques, and major process features of the facilitated small-group method, within a broader workshop structure for larger audiences. Familiar in other subject-matters, the "workshop" arranges the audience in several small, leaderless groups, each with certain responsibilities for actualizing aspects of the educational experience; together, the groups come to represent a community of mutual interest, as the developmental structure of the process integrates the contributions of the several discussion units.

The spirit and application of the method have since been fully detailed and demonstrated, in work at the University of Oregon (Lynch, 1978), at North Texas State University (Manion and Lynch, 1978), and at the University of British Columbia (Lynch and Riddell, 1979). It was recognized in the earliest experiments that the model preserved the most attractive qualities of the facilitated small-group method, while offering the economy of a large-audience format. The concept has, in fact, proved among the more immediately interesting ones to sponsor interests independent of the project, and it has already attracted additional study (especially, Owen, 1979).

Again, leadership requires one trained in group educational techniques, principles of andragogy, or similar foundations; often such a method is managed by a co-leading team, preferably consisting of a man and a woman. And, again, it was the belief of the project staff that appropriate candidates could be prepared for such leadership via short-term training. Demonstrations in workshop process were made a part of the second- and third-year training events, and programs of this type in the field were installed as a major feature of the third program/data cycle.

b. Sponsor-Settings.

The least durable of the two foundational constructs has been the original conception of the four sponsor-settings, as equally feasible channels for pre-retirement education programming. The matter of social responsibility and initiative for broad pre-retirement education had drawn only isolated attention at the time of the original definitions, and the term of the project has coincided with a period of remarkable growth in pre-retirement education activities. Emerging from the wealth of activity is a much clearer picture of sponsor interests, viable delivery agents, patterns of program development, and related factors. It has become evident that pre-retirement education is, and will be, largely stimulated and carried on by employer (and probably labor) interests, on the one hand, and by organized educational agencies, on the other. Increasingly, cooperative efforts among these interests will be instrumental in such programming. The matter of training program leaders, as this education becomes more elaborated, additionally links educational agents and other sponsor organizations.

Ultimately, it was seen that the sponsor-setting construct did not consist of the discrete categories attributed to it. The failure of the conception was manifest in the inability of the project to recruit potential program leaders, in sufficient numbers, from all of the settings as defined. For descriptive purposes--that is, as a set of definitions about how and where

programming engages its intended clientele--the idea gave way to classification by enrollment context (Table 1). As a principal predictor variable, however, the concept simply evaporated. The following brief observations suffice:

1. Employer Context: Though employer interests in pre-retirement education are expanding steadily, the setting was not usable as prescribed in the study for one over-riding reason: Potential trainees (from personnel units, training-and-development sections, etc.) do not find it in the normal pattern of their employment calendar to devote a one-month period of the summer to an educational three-week activity which requires their being domeciled away from home (and which would probably exhaust their regular vacation entitlement in many cases). The training requirement fully obstructed recruitment of potential leaders in the private sector. Two points are important here: First, the employer, as a co-interested party, and as an immediate source of clientele groups, remained strongly present in the study, indirectly, as is seen below in discussion of the Education Context (and see Appendix A-2). Second, other training programs and research, influenced in part by the work of this project, have responded to the necessity for short term training concepts that can be taken into the employer unit.

2. Education Context: Recruitment here was fully successful, and programming in this context represents the project's most extensive and best work. Among the imagined settings, it was the community college that provided a sufficiently flexible organizational framework, as well as the appropriate educational interface with the pre-retirement-aged clientele (and with their employers). The project was successful in encouraging community-college educators to recruit employer "co-sponsors" for programming, rather than to depend solely upon open-enrollment offerings to the public. Where this co-sonsorship/recruitment approach was pursued, program leaders more readily met their enrollment needs, while at the same time establishing the employer's position in this kind of programming, and creating the possibility of new lines of communication between the institution and local employers (see Appendix A-2).

3. Community Agency Context: Recruitment of program leaders was moderately successful here, and some programs were carried out. However, collection of assorted agencies as a conceptually allied category of interests in pre-retirement education proved untenable. In the case of mental-health service agencies--which collectively had been seen as a chief avenue for experimental programming, some potential leaders were recruited and did complete the campus training; none of these leaders were able to mount sufficiently enrolled programs in their respective settings, however. Programs in community-center settings--mounted variously by freelancing instructors, recreation department personnel, and the like--fared a little better in attracting participants. In sum, though, the total yield in participants did not support the research as originally envisioned.

4. Social Organization and Volunteer Context: The project was unable consistently to recruit representatives of churches, volunteer organizations, professional associations, fraternal organizations, and the like in sufficient numbers to support the context as originally established.

It was seen that programs are ultimately made available along one of two general interfaces with potential participants: (1) the publicly offered, "open enrollment" interface; and (2) the privately offered, organizational interface. In the first case, programs are offered for public subscription by educational institutions, community agencies, freelance instructors, and so on. In the second case, programs are offered to a defined group: a program for a specific employer's workers is the chief example. Under the influence of other pertinent distinctions (Table 1), each of these possibilities sub-divides, yielding four enrollment contexts.

(1) Open-enrollment programs offered by an educational institution, such as a community college;

(2) Open-enrollment programs conducted by other community agencies, such as senior centers, churches, recreation departments;

(3) Employer-sponsored programs in public employment settings;

(4) Employer-sponsored programs in the private sector.

To illustrate the matter, Table 1 shows final subject numbers in the four categories, for all subjects encountered by the study, and for the central treatment-effects (RPI) study subjects (see Appendix A-2 for complete discussion of the study subjects).

Table 1. SUBJECT TOTALS IN ENROLLMENT CONTEXTS.

Enrollment Context	All Subjects No.	All Subjects %	RPI Subjects No.	RPI Subjects %
1. Open enrollment offered by educational institution	133	17%	88	16%
2. Open enrollment offered by other community agency	81	11%	34	6%
3. Public employer setting	322	43%	230	43%
4. Private employer setting	218	29%	182	34%
	754	100%	534	100%

Program Leaders: Recruitment, Training, Program Implementation. As was established in discussion above, the ability of the project to carry out its research depended upon several events involving agents from beyond the project staff. These agents were the program leaders who, first, had to be recruited and trained, and, second, had to deliver programs (treatments) for observation governed by the study. The extent to which these conditions were met is illustrated in Table 2 and summarized below.

Table 2. PROGRAM LEADERS - totals sought, engaged in training, and delivered programs, by program/data cycle.

Program/Data Cycle	(A) Originally Projected No. Leaders	(B) Final Number Sought	(C) Entered & Completed Training	(D) Delivered at Least 1 Program	(E) Delivered All Programs As Planned
#1 - 1975-76	12	12	10	8	8
#2 - 1976-77	12	12	9	7	5
#3 - 1977-78	12	16	16	10	8
Totals	36	40	35	25	21

1. Recruitment: Until adjustment was made (below), recruitment failed to meet the requirements of the sponsor-setting construct and to provide the specific numbers of leaders desired. With respect to setting, interested, potential leaders who could participate proved most accessible in educational institutions. With respect to geographic distinctions, the effort was most disappointing in the region's two smaller states--Idaho and Alaska; only three leaders were successfully recruited from each of these states. Eighty-three percent of all leaders who completed training were engaged in Oregon and Washington.

2. Training: The training was seen as a dependable and successful link in the sequence of events involving the outside agents. Of course, the University of Oregon had for several years conducted the summer training workshops in pre-retirement education, incorporating foundations in gerontological studies, contemporary adult-education theory, and the demonstration of an actual program among pre-retiree/employees of the University. Of the 35 trainees who completed the training experience, only three felt unprepared to lead the required

programs, and 71% of them did ultimately conduct at least one program within the study guidelines. 60% completed all programming asked of them--providing sufficient data for the intended analysis under the adjusted design (below).

3. Program Implementation: Engaging participants in their respective communities became the leaders' final challenge. With extensive, continued support from project staff, the leaders did achieve a level of programming sufficient to the project's needs. A working matrix of 60 programs was projected upon the 35 leaders who entered training (one treatment each in the first cycle, two treatments each in the second and third cycles). Forty-three of these programs (72%) were realized. Seventy-nine percent of the effort was mounted in Oregon and Washington, 9% in Alaska, 7% in Idaho, and (by special arrangement) 5% in California. In these programs 754 subjects were encountered: Variations in demographic factors, as characteristics of these subjects, are fully set out in Appendix A-2.

The solution to the recruiting problem for the third cycle was brought within reach by the abandonment of the original sponsor-setting requirement (discussed above). This major adjustment involved the decision to select program leaders representing a single, feasible delivery agency: It had already been seen that, apart from programming initiated directly within organizational contexts (by employers, for example), certain educational institutions were the most likely agents for such programming. Because, for reasons already set out, the training requirement obstructed the recruitment of program leaders from the employer context, the project staff selected community colleges to become the sole treatment agent for the third cycle.

To compensate for the reduced leader numbers (and reduced programming effort) in the first and second cycles, the recruitment target for the third cycle was increased (Table 2, column B). About 60 institutions in the region were polled regarding their interest in participating in the research. From about 30 applicants, 16 trainees and four alternate trainees were chosen, primarily on the basis of geographic distribution and population factors. In fact, trainees representing 16 different community colleges did enter and complete the training. Only one of these reported feeling unable to carry out the desired programming following training. Ten of the leaders did conduct programs. Eight of them successfully delivered both treatments being observed in the third cycle. Five were unable to mount sufficiently enrolled programs in their respective locales. Most important here, however, were the larger total enrollments provided by the successful leaders: Of the 534 pre-test

subjects in the central treatment-effects study, 301 of them were provided by these third-cycle programs. In the great majority of cases, the successfully enrolled programs were those where the community college, as delivery agent, enlisted the co-sponsorship interest of local employers. Open-enrollment programs were consistently under-subscribed.

Summarily, the following points stand out:

(1) Nearly all of the potential leaders who entered training did complete that training and did indicate their feeling able to conduct programming of the types desired by RSRPP;

(2) Seventy-one percent of those who did complete training did ultimately deliver at least some of the programs requested of them.

(3) Sixty percent of trained leaders eventually delivered all of the programs requested of them.

(4) Clearly, those most likely to be able, first, to attend regular campus training in this subject-matter, and, second, to mount successfully enrolled programs in diverse communities, have been representatives of educational settings--and particularly community colleges.

(5) Too, it has been seen that successful programming by a public delivery agent has been achieved most readily when the mutual interests of employing organizations are joined in co-sponsorship of the programming.

(6) As a downstream effect, it has already been observed that employing organizations, so entered by the educational delivery agent, have in some cases assimilated the skills involved and established regular programming for employees led by in-house personnel-unit staff.

Other Threats to Methodological Integrity. It is not surprising that essential requirements of experimental design, as originally applied in this study, were unrealizable in the field. Where the treatments were to be managed by outside delivery agents, under a variety of environmental conditions, the systematic achievement of random-selection and control-group parity could not be reasonably expected. Traditionally serious challenges to this type of research, these matters were no less so here. As the project interpreted its first cycle of activity, it was evident that the study must move toward a design type with compensating statistical approaches to variance control.

Procedural models for the random selection of program participants, and of corresponding selection of control groups, were simply not usable in the field, specifically because of the variability of conditions under which leaders recruited and encountered their subjects. These problems were addressed by major design adjustments adopted for the central treatment-effects study, which was implemented for the second and third program/data cycles; the adjustments are outlined in the appropriate section below.

A final methodological issue had to do with the availability of suitable instrumentation for data collection. As established, the predictors of interest included educational methods and program settings. The criteria of interest have been consistently identified as information, attitudes, and behavior related to retirement and planning for retirement. The study intended to investigate the relative merits of several categories within the predictor constructs (i.e., assorted teaching/learning models and different sponsor-settings), in terms of measured changes in information, attitudes and behavior.

At the outset, no instrumental system for such a purpose had been tested. It was anticipated that data would be collected via several traditional measures of morale, life-satisfaction, and adjustment, and some untried measures of information about retirement, and that analysis of preliminary responses would yield an instrumental protocol for subsequent data-collection. The plan failed because data from the initial cycle was insufficient to support a meaningful analysis for item-development purposes. During the same period, however, work in a separate study at the University of Southern California had accomplished precisely that objective, and RSRPP was able to adopt the newly developed instrumental package for data-collection in its second and third cycles (discussed in greater detail below).

Adjustments in Research Design and Procedures

Problems, then, were of both the technical-methodological and practical-operational types. In response, the project applied an integrated package of adjustments after the first program/data cycle. The adjustments intended--within the freshly encountered and acknowledged limitations--to focus the remaining effort upon reasonable objectives serving important portions of the original conception. Major aspects of the adjustments are summarized below.

Appendix B-1, as the concluding report upon the central treatment-effects study, more fully illuminates the design revisions.

(1) As a relevant and testable independent-variable construct, or predictor, the original conception of sponsor-setting was abandoned. The study of treatment effects was focused wholly upon investigation of the educational methods of interest: model categories were permanently defined as (a) unstructured information types, (b) facilitated interaction groups, and (c) multi-group workshops. The effects would continue to be interpreted in reference to the specified criteria--information, attitudes, behavior.

(2) At the time of the adjustments, second-cycle leaders had already been recruited and trained. For the remaining cycle, the recruitment target was increased from 12 to 16 leaders, and the context was narrowed to the region's community colleges (and comparable adult-education agencies); subsequently, a broad effort reaching about 60 such organizations produced the first fully successful recruitment year.

(3) In response to technical-methodological limitations in the matter of variance control, design was reconceptualized as a statistically rigorous evaluation model, cast in an inferential, predictive framework for observing the relative effects of different teaching/learning methods, via the measurement of change. Though the design might have been argued as a supportable quasi-experimental type, it is best seen in the evaluation mode, as applied by Tiberi, Boyack, and Kerschner (1978), and in a variation by Owen (1979). Again, details of the design and of methods of data-analysis are fully set out in Appendix B-1.

(4) Leaders were allowed to mount their programs using procedures usual to their circumstances, without regard for sampling conditions and control-group concerns (attended in design revisions). All pre-retirees enrolling in programs in the second and third cycles (pre-test N=534) were uniformly viewed as "subjects" within the parameters of the revised design for the central treatment-effects study.

(5) Data Collection was systematized using the Retirement Preparation Indexes (Tiberi, Boyack, and Kerschner, 1978). Questionnaires measured subjects in the second and third cycles in reference to tested factors within the specified global attributes--information, attitudes, and behavior; data was gathered in a pretest-posttest protocol (posttest at three months following treatment). Great effort was taken by staff to standardize and monitor the data-collection procedures in the field.

References A-1

Lynch, J. H. Pre-retirement education: Issues in nomenclature and methodology. Paper delivered at the 23rd annual meeting of the Western Gerontological Society, Denver, March, 1977 (Educational Gerontology, in press).

Lynch, J. H. Two Models for Pre-Retirement Education. Eugene, Oregon: University of Oregon, Center for Gerontology, March 1978.

Lynch, J. H., and B. G. Riddell. Pre-Retirement Education: A Multi-Group Discussion Approach. Vancouver, Canada: The University of British Columbia, Centre for Continuing Education, February, 1979.

Manion, U. V. Preretirement counseling: The need for a new approach. Personnel and Guidance Journal. 55,3(November):119-121, 1976.

Manion, U. V., and J. H. Lynch. In-Career Planning for Retirement: An Integrated Reading-Discussion Workshop. Denton, Texas: Prepared for the Office of the Governor, in cooperation with the North Texas State University Center for Community Services, January, 1978.

Owen, C. S. An Evaluation of A Short-Term Preretirement Education Program Using Measurement of Change. Doctoral Dissertation, Eugene, Oregon: University of Oregon, College of Education, June, 1979.

Tiberi, D. M., V. L. Boyack, and P. A. Kerschner. A comparative analysis of four preretirement education models. Educational Gerontology, 3,4(Oct.-Dec.):355-374.

APPENDIX A-2

Project:
A Research Study of Retirement Preparation Programs
Grant No. 5 RC1 MH 23949
National Institute of Mental Health
Grantee Institution:
University of Oregon
College of Health, Physical Education, and Recreation
University of Oregon Center for Gerontology
Principal Investigator: Frances G. Scott, PhD.
Project Director: James H. Lynch, PhD.

The Study Subjects: Characteristics and Demography

James H. Lynch, PhD.

Under the Research Study of Retirement Preparation Programs 754 pre-retirees were encountered in 43 pre-retirement education programs. The programs were carried on by 25 RSRPP-trained leaders, in 22 different communities in five western states: Alaska, Idaho, Oregon, Washington, California. The purpose of the research was the study of the relative effectiveness of different educational methodologies for pre-retirement programming. This writing reviews general demographic and miscellaneous descriptive information developed about these subjects.

Data Categories and Terminology

Data were collected during three cycles of program/data activity, from 1975 through 1978. The accumulated data are differentially combined for analysis as follows:

(1) ALL SUBJECTS: For certain demographic observations and background studies, observations are referenced to all subjects who entered programs and provided data (N=754);

(2) RPI SUBJECTS: The main treatment-effects study is referenced to subjects who entered treatment in the second and third program/data cycles, and who provided data via the "Retirement Preparation Indexes" (RPI) questionnaires (N=534).

Discussion also sub-references the RPI subjects as follows:

(1) RPI pre-test subjects: Those who entered programs and completed the RPI pre-test (N=534);

(2) RPI summative evaluation subjects: Participants who completed programs and furnished summative evaluation data about their program experiences (N=441);

(3) RPI post-test subjects: Those who completed programs and subsequently furnished data at a 3-month follow-up point via the RPI post-test (N=336).

Outside of this framework, selected questions were pursued for shorter periods of time, and interpretations are referenced to specific periods of program/data activity, as follows:

(1) program/data cycle 1, 1975-76 (pretest N=220);

(2) program/data cycle 2, 1976-77 (pretest N=233);

(3) program/data cycle 3, 1977-78 (pretest N=301).

The RPI sample, which combines the data from program/data cycles 2 and 3, is further delineated in Table D-1.

Table D-1. RPI SUBJECT TOTALS, BY TREATMENT MODE - showing attrition through program term and follow-up term.

	Treatment Mode[1]			
	A	B	C	TOTAL
Entered programs and completed PRE-TEST questionnaire	163	120	251	534
Number/Percent completed programs	102/63%	105/88%	234/93%	441/83%
Number/Percent returned 3-month follow-up form	60/37%	90/75%	186/74%	336/63%
(%LOSS at 3-month follow-up)	(63%)	(25%)	(26%)	(37%)

[1]A = unstructured information types (including lecture series, informal reading-discussion models).
B = facilitator-led small-group ("interaction") methods.
C = multi-group workshop models.

Enrollment Context and Employer Type. Certain descriptive categories are associated with the circumstances of enrollment. The first of these distinctions defines four enrollment contexts. It is seen that programs are ultimately made available along one of two general interfaces with potential participants: (1) the publicly offered, "open enrollment" interface; and (2) the privately offered, organizational interface. In the first case, programs are offered for public subscription, by educational institutions, community agencies, freelance instructors, and so on. In the second case, programs are offered to a defined group: a program for a specific employer's workers in the chief example. For the present data, these two possibilities are sub-divided to reflect other pertinent distinctions, yielding the four enrollment contexts:

(1) Open-enrollment programs offered by an educational institution, such as a community college;

(2) Open-enrollment programs conducted by other community agencies, such as senior centers, churches, recreation departments;

(3) Employer-sponsored programs in public employment settings;

(4) Employer-sponsored programs in the private sector.

Table D-2 shows subject numbers in the four categories.

Over 70% of all subjects and nearly 80% of the RPI subjects were encountered in programs of the employer-sponsored type. In the majority of cases, the project's agent in the co-sponsorship of the program with the employer was a local community college. Indeed, with respect to attracting participants, this collaboration between delivery agent and employer proved the significantly more viable approach (compared with open-enrollment offerings). The subjects provided by such programs are further delineated in reference to the general activities of the employing organizations. Table D-2 shows the distributions of both the public- and private-sector groups within broadly conceived employer types; these categories do reflect certain dominant themes in the employment structure of the region (wood products, education, natural resources, energy production).

Table D-2. SUBJECT TOTALS IN ENROLLMENT CONTEXTS, AND BY EMPLOYER TYPE.

	All Subjects No.	%	RPI Subjects No.	%
Enrollment Context				
1. Open enrollment offered by educational institution	133	17%	88	16%
2. Open enrollment offered by other community agency	01	11%	34	6%
3. Public employer setting:	322	43%	230	43%
(a) education	(129)		(118)	
(b) natural resources, utilities	(106)		(25)	
(c) other public employers	(87)		(87)	
4. Private employer setting:	218	29%	182	34%
(a) wood products/paper	(106)		(106)	
(b) energy, chemical	(90)		(54)	
(c) other private employers	(22)		(22)	
	754	100%	534	100%

a. Delivery Agents

In returning to a community following training by RSRPP, a program leader normally developed and delivered pre-retirement programming within one of these general administrative frameworks: (1) independently, as a freelance agent; (2) in association with a community-service setting; or (3) as an employee of an educational institution. As discussed in an earlier part of this report, the project was unsuccessful in recruiting representatives of employer personnel units to participate in the study. Most of the program leaders were of the second and third types mentioned, and community colleges dominate the list of organizations which ultimately became official delivery agents. Below, a listed agent may have been responsible for programs by more than one leader, as well as for programs in more than one community, and the number of programs carried out varies among the agents.

Portland Community College, Portland, Oregon
Emerald Baptist Church, Eugene, Oregon
Willamalane Parks and Recreation District, Springfield, Oregon
Public School District 9, Coos Bay, Oregon
Cottage Grove Hospital, Cottage Grove, Oregon
Clackamas Community College, Oregon City, Oregon
North Seattle Community College, Seattle, Washington
Everett Community College, Everett, Washington
Olympic Community College, Bremerton, Washington
Idaho State University, Pocatello, Idaho
Lewis-Clark State College, Lewiston, Idaho
Umpqua Community College, Roseburg, Oregon
Walla Walla Community College, Walla Walla, Washington
Wenatchee Valley Community College, Wenatchee, Washington
Eastern Washington State University, Cheney, Washington
Southwestern Oregon Community College, North Bend, Oregon
Central Oregon Community College, Bend, Oregon
Anchorage Community College, Anchorage, Alaska
Jewish Community Center, Portland, Oregon

b. Employer-Sponsor.

As seen in Table D-2, employers served as co-sponsors for programs reaching a majority of the subjects. Employers who participated in this capacity are listed below:

Scott Paper Company, Everett, Washington
Public Utility District, Everett, Washington
Idaho State University, Pocatello, Idaho
Rogue Valley National Forest (USDA), Medford, Oregon
Willamette National Forest (USDA), Eugene, Oregon
Clackamas Community College, Oregon City, Oregon
International Paper Company, Gardiner, Oregon
J. C. Penney Company, Roseburg, Oregon
Bend Millworks, Bend, Oregon
Puget Sound Naval Shipyard, Bremerton, Washington
Portland Community College, Portland, Oregon
Federal Aviation Administration, Anchorage, Alaska
Standard Oil Company of California, San Francisco, California
US Bureau of Land Management, Anchorage, Alaska
University of Alaska, Anchorage, Alaska
Fort Richardson (civilian employees), Anchorage, Alaska
St. Mary's Hospital, Walla Walla, Washington
Public School District 140, Walla Walla, Washington
Roseburg Lumber Company, Roseburg, Oregon
North Seattle Community College, Seattle, Washington
Eastern Washington State University, Cheney, Washington
J. R. Simplot Company, Pocatello, Idaho

Definitions of Program Locales. Subjects can be observed in reference to familiar locale types. Table D-3 distributes subjects across three such categories, which represent distinctions appropriate to the character of the study region (these distinctions are amplified in discussion following the table).

Table D-3. LOCALE TYPES - subject totals and percents in metropolitan settings, smaller urban centers, and rural locales.

	All Subjects		RPI Subjects	
	No.	%	No.	%
Locale Type				
Metropolitan	354	48%	214	42%
Smaller Urban Center	146	20%	94	18%
Small Town and Rural	232	32%	204	40%
TOTAL	733[1]	100%	513[2]	100%

[1]97% of subjects represented. [2]96% of RPI subjects represented.

Broadly, the categories represented in Table D-3 are defined as follows (the actual communities included are shown in each case).

(1) Metropolitan: Generally, locales within Standard Metropolitan Statistical Areas (SMSA's), or contiguous communities that are subjectively viewed within the greater population center.

Portland, Oregon
Eugene, Oregon
Cheney, Washington (Spokane County)
Richmond, California (Contra Costa County)
Oregon City, Oregon (Clackamas County)
Seattle, Washington
Everett, Washington
Concord, California (Contra Costa County)
Anchorage, Alaska

(2) Smaller Urban Center: Usually, principal Urbanized Areas of more than 35,000 population, which have not been designated as SMSA's and are not located in counties whose populations are inflated under the influence of contiguous SMSA's.

Pocatello, Idaho
Corvallis, Oregon
Springfield, Oregon*
Bremerton, Washington
Medford, Oregon

(*Springfield is a part of the Lane County SMSA; however, it is regarded as a separate "Urbanized Area" from the principal population center of Eugene.)

(3) Small Town and Rural: Other smaller communities, which, in almost all cases, are also situated in lower-density counties.

Cottage Grove, Oregon	Coos Bay, Oregon
Reedsport, Oregon	Lewiston, Idaho
Roseburg, Oregon	Bend, Oregon
Walla Walla, Washington	Wenatchee, Washington
North Bend, Oregon	

Subject Characteristics

Sex and Age. In simple dichotomous terms, sex representation was equivalent. Among all subjects, less than a one-percent difference distinguished the numbers of male and female participants (Table D-4). In the RPI group, the difference was only slightly greater, with the women in the majority.

Table D-4. SEX AND AGE - all subjects (N=754)[1]

I. Males and Females: totals, as percents of the study sample, and mean ages.

	Number	Percent	Mean Age
Males	376	50.3	57.9 yrs.
Females	372	49.7	56.2 yrs.
ALL SUBJECTS	748[2]	100 %	57.1 yrs.

II. Five Age Increments: numbers and percents of males, females, and all subjects.

	Males		Females		All Subjects	
	No.	%	No.	%	No.	%
Number/Percent:						
Under 50 years old	23	6.2%	39	10.6%	62	8.4%
50 - 54	64	17.3%	77	20.9%	141	19.1%
55 - 59	129	35.0%	139	37.8%	268	36.4%
60 - 64	136	36.9%	103	28.0%	239	32.4%
65 and over	17	4.6%	10	2.7%	27	3.7%
	369	100 %	368	100 %	737	100 %

[1]Unreported data causes subject total to vary slightly from one observation to another.
[2]99% of all subjects represented.

As a descriptive characteristic, however, sex is best analyzed here in reference to several other factors: marital status, occupation, and attendance basis (below) combine to point up important differences between the male and female representations.

With respect to age, the definitive portion of the subjects was that between 50 and 65 years: only 8% of all subjects were under 50, less than 4% over 65. Nearly 70% fell in the nominally "pre-retirement" age-range of 55-64 years. The age distribution for men found them heavily concentrated around their mean age of 57.9 (Table D-4.I): 72% of them fell in the 55-64 age range, and almost 42% were over 60. In simple terms, the age-curve for women was younger: the most noticeable concentration developed in the narrower 55-59 age-range (Table D-4.II), and only about 31% were over 60.

Marital Status and Attendance Basis. The study samples were dominated by married persons--84% of all subjects and 82% of RPI subjects. Almost 95% of the men were currently married, a smaller 79% of the women. Conversely, 80% of the unmarried subjects were women.

Marital status also emerges as an aspect of another characteristic called "attendance basis." RPI subjects were asked if program attendance had been stimulated primarily in reference to one's own or to one's spouse's future retirement. Admittedly, the responses of spouses were influenced by the program setting: If, for example, a wife (regardless of being herself employed elsewhere) attended a program sponsored by her husband's employer, she might indicate her attendance basis as spouse of pre-retiree (the matter was left to her perception). Very different patterns ultimately emerged for men and women (Table D-5).

Over 90% of the RPI males attended these programs as pre-retirees concerned with their own retirements; only 53% of the females classified themselves in this manner. A sizable 47% of the women were stimulated to attendance primarily in their status as spouses of male pre-retirees. Of these women, of course, a considerable number were themselves regularly employed, but just over half of them (23% of all RPI females) appeared as otherwise unemployed homemakers (Table D-5). The situation appears to involve the greater freedom and willingness of women to attend programs that are sponsored by and perhaps carried out in their husband's work settings. Most husbands of pre-retirement

women are themselves regularly employed, and they are much less in evidence in programs offered in their wives' work settings.

Table D-5. ATTENDANCE BASIS - Retirement, Marital, and Employment role factors in impetus for program attendance, for men and for women, RPI subjects only.[1]

	Of 256 Men	Of 270 Women
Reported Basis of Attendance		
% as pre-retiree (employee)	92%	53%
% as spouse of pre-retiree:		
(a) otherwise regularly employed	3%	17%
(b) otherwise unemployed homemaker	2%	24%
(c) already retired	3%	6%
	100%	100%

[1]99% of RPI subjects represented.

Education. Education patterns among the study sample seem quite typical of the cohorts in question (within the geographic region involved). Only about 12% of all subjects reported less than a high-school education; at the other end of the scale, nearly 28% were college graduates (Table D-6). The sample is most noticeably represented by the 60% of subjects who had completed high school, and perhaps some college.

Historical patterns characteristic of the cohorts involved are evident in the differences between men's and women's educational attainments. More men are present among the least and most educated: (1) of those who reported less than a high-school education, 66% were men; (2) of those who reported college graduate work or advanced degrees, 71% were men. Proportionately more men than women have traditionally left school earlier to take up occupational pursuits and family responsibilities. Women, more likely to have completed high school, have traditionally set aside educational participation immediately after high school or after undergraduate college studies. Such is precisely the picture here (Table D-6.II), where the women are highly concentrated in the high-school-graduate and baccalaureate categories. Only 7% of the female subjects reported graduate work completed, compared with 17% of the males.

Table D-6. EDUCATION - all subjects[1]. Totals and percents in four categories of educational attainment. Additionally shown by sex (II).

I. Subject totals and percents in four incremental categories.

Education Completed	Number		Percent	
Less than high school		91		12.2
High-school graduates, plus those with some college		449		60.2
College graduates:		206		27.6
(baccalaureate degrees)	(114)		(15.3)	
(graduate work or advanced degrees)	(92)		(12.3)	
		748		100 %

II. Males and Females: totals and percents in four categories.

Education Completed	Males		Females	
	No.	%	No.	%
Less than high school	60	16.0	31	8.4
High-school graduates, plus those with some college	197	52.7	250	67.6
College baccalaureate degree	52	13.9	62	16.7
Graduate work or advanced degree	65	17.4	27	7.3
	374	100 %	370	100 %

[1]Unreported data causes subject total to vary slightly from one observation to another.

Summarily, the subjects present a relatively strong picture of basic educational attainment (Table D-6.II): 84% of the men and over 90% of the women had completed high school. And slightly more than 31% of the men and exactly 24% of the women had completed college studies at least at the baccalaureate level.

Occupations. Table D-7 sets out occupational characteristics of the study sample along several lines. Various summary observations are pertinent: (1) Many more men than women populated the skilled-worker, manager/supervisor, and miscellaneous blue-collar categories; (2) Women, in turn, dominated the sales/service/clerical and unemployed homemaker groups; (3) the distribution by sex moved toward its closest balance in the executive/professional/self-employed category, where the bulk of the inflated total consisted of teachers--57% were males, 43% female. These patterns certainly reflect long-standing occupational differences between men and women, and they do seem typical of the cohorts involved.

It was seen in Table D-3 that only 20% of all subjects were encountered in the smaller urban centers, and their distribution within the six occupational categories (Table D-6.III) does depart most noticeably from patterns in the other two locale-type subsets (much lower proportion of professionals, higher proportions of certain blue-collar occupations in the skilled-worker and manager/supervisor categories). Programs carried out in the smaller urban centers were, in fact, concentrated in production, fabrication, and natural-resources settings--involved with wood products, shipbuilding, chemicals, forestry. Also noteworthy was the much higher proportion of less skilled blue-collar workers within the most rural subset.

Of the 187 subjects in the inflated professional group (Table D-7.I), 101 were encountered in the metropolitan subset. Thus, though the proportions for this category within the metropolitan and most rural subsets were nearly identical (Table D-7.III), 54% of the subjects actually attended in metropolitan areas, only 32% in rural areas. In another trend, 75% of the 120 predominantly white-collar workers in the sales/service/clerical category were found in the metropolitan and smaller-urban subsets. In addition to the blue-collar observation above, then, the rural group was also noted for its much smaller proportion of white-collar workers.

All subjects in the general study sample were asked about how long they had worked for present employers. Nearly all of the employed subjects answered the question, revealing that about 45% had exceeded 20 years with current employers. The seemingly large proportion of 26% who reported less than 10 years can be accounted for largely by two phenomena--married female subjects who re-entered the work-force in later years, and the normally greater occupational mobility of certain professional groups (who are heavily

Table D-7. OCCUPATIONS - all subjects[1]. Totals and percents in six occupational categories. Additionally shown by sex (II) and by program locale type (III).

I. Subject totals and percents.

Occupational Category	All Subjects[2] No.	%
Homemaker	80	11.7
Executive/Professional/Self-employed[3]	187	27.3
Manager/Supervisor	116	16.9
Skilled Technicians & Craftpersons	99	14.4
Sales/Service/Clerical	120	17.5
All Other Blue Collar	84	12.2
	686	100 %

II. Males and Females.[4]

	Males No.	%	Females No.	%
Homemaker	4	1.1	74	23.2
Executive/Professional/Self-employed[3]	106	29.2	81	25.4
Manager/Supervisor	83	22.9	32	10.0
Skilled Technicians & Craftpersons	83	22.9	15	4.7
Sales/Service/Clerical	23	6.3	97	30.4
All other Blue Collar	64	17.6	20	6.3
	363	100 %	319	100 %

III. Percents of subjects in six occupational categories for each program-locale-type subset.

	Program Locale Type		
	Metropolitan	Smaller Urban Center	Small Town or rural
Homemaker	11.0	10.9	12.8
Exec/Prof/Self-empl[3]	31.0	18.8	29.0
Manager/Supervisor	17.8	20.3	13.8
Technical/Craft	12.3	18.8	14.8
Sales/Service/Clerical	18.1	21.0	14.3
All Other Blue Collar	9.8	10.1	15.3
	100 %	99.9%	100 %

[1]Unreported data causes subject total to vary slightly from one observation to another.
[2]91% of subjects represented.
[3]The bulk of the inflated total in this category consists of teaching professionals. Several programs recruited among institutional faculties for participants (see text for discussion). Refer to D-7.II for distribution by sex.
[4]90% of subjects represented.

represented here). At the other end of the scale, 17% of the total reported 30 or more years with present employers.

Most of these occupational patterns appear consistent with normal expectations about the cohorts in question and among groups derived in the manner used. The inflated number of professional teachers, however, does distort the overall distribution and must be duly noted in interpreting these data.

Income. General estimates of annual household income were solicited among RPI subjects. A participant was asked to estimate annual income, and to include spouse's income if applicable. Thus, some of the data represent dual reports of the same household income. Extrapolating from data shown earlier in Table D-5, one concludes that married couples with two incomes accounted for at least 20%[1] of the RPI subjects. The phenomenon dually affects the data: those households with higher incomes by virtue of two working members are also represented twice.

Further confounding the picture are the strikingly different response rates in program/data cycles 2 and 3 (Table D-8). It was assumed after cycle 2 that the wording on the income question had caused many attending specifically as spouses of pre-retirees to ignore the question. Repair of the wording in cycle 3 obviously solved that problem, but it fully installed the dual-report characteristic noted above.

Finally, participants indicated income by checking one category on an incremental scale, and different scales were used in two cycles involved.

Cycle-2 Scale	Cycle-3 Scale
Up to $3,600	Up to $5,000
$3,600 - $6,000	$5,000 - $10,000
$6,000 - $12,000	$10,000 - $15,000
$12,000 - $18,000	$15,000 - $20,000
$18,000 - $25,000	$20,000 - $25,000
Over $25,000	Over $25,000

The scales can be merged only at the $25,000 point, yielding a picture of the combined data in two broad categories of incomes below and above that level: data representing 86% of all RPI subjects shows 67% of them reporting less than

[1] .03x256 men + .17x270 women = 54 regularly employed spouses x 2 (pre-retiree mates in attendance) = 108 ÷ 526 = 20.5% of subjects represented.

$25,000 annual income, 33% reporting more than that amount. Using re-combined incremental categories, Table D-8 shows the separate data for the two cycles and additionally examines sex differences (D-8.II) within that data. Given the noted biasing characteristics, one must draw very limited conclusions from this small amount of data; however, it is apparent that the larger proportion of women in sales/service/clerical occupations and the smaller proportion of them in managerial/supervisory positions (Table D-7) is generally reflected in the income-level figures.

Table D-8. ANNUAL INCOME - RPI subjects, totals and percents in incremental categories, in separate subsets for program/data cycles 2 (1976-77) and 3 (1977-78). Additionally shown by sex (II).

I.	Number	Percent
Cycle-2 Categories		
Up to $12,000	54	32.9
$12,000 - $25,000	86	52.4
Over $25,000	24	14.6
	164[1]	99.9%
Cycle-3 Categories		
Up to $10,000	26	8.8
$10,000 - $20,000	87	29.4
Over $20,000	182	61.7
	295[2]	99.9%

II. Males and Females: percents in incremental categories, in separate subsets for program/data cycles 2 and 3.

	Males	Females
Cycle-2 Categories		
% up to $12,000	14.4	38.6
% $12,000 - $25,000	54.5	43.6
% over $25,000	31.1	17.8
	100 %	100 %
Cycle-3 Categories		
% up to $10,000	7.6	13.0
% $10,000 - $20,000	25.2	40.0
% over $20,000	67.2	46.9
	100 %	99.9%

[1]70% of cycle-2 subjects responding. [2]98% of cycle-3 subjects responding.

In regard to income matters, participants were also asked the following question:

> Apart from Social Security, will you or your spouse retire with some kind of regular income from a work-related benefits program (such as from a pension, retirement annuity/investment plan, employer stock package, etc.)?

About 86% of the RPI subjects responded to the question, 83% of them indicating that they would have such income.

The study sample does reflect generally expected income characteristics vis-a-vis the participants' ages, career maturity, geographic region, occupations, and sex-distribution. Admittedly, the picture is biased by the larger than normal proportion of professionals, who surely also contribute to the strong presence of the dual-income phenomenon (teaching, especially, is an area where a woman commonly represents one of two incomes in a married household). The bias is continued in the larger than normal proportion anticipating regular retirement income from some kind of pension-like program.

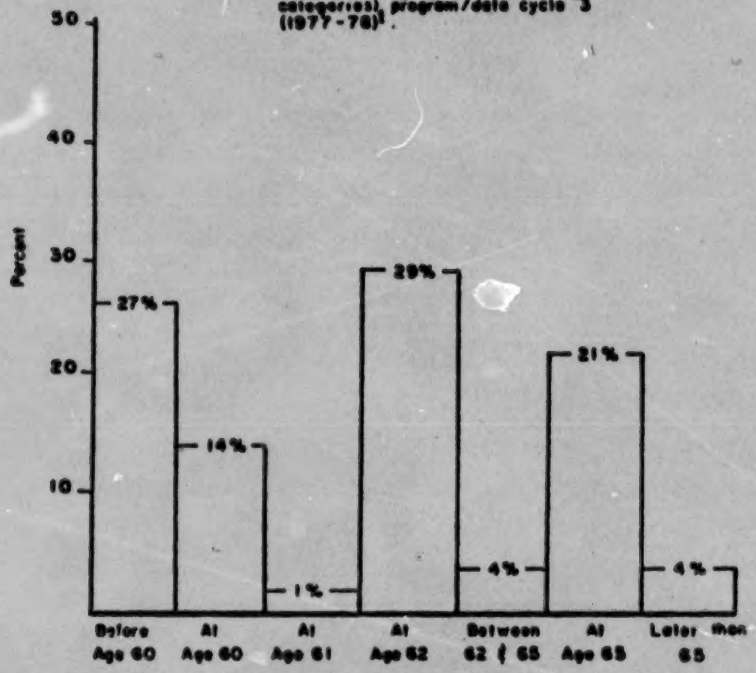
Miscellaneous Information. The following comments summarize additional observations made from questionnaire data.

(1) VOLUNTARY/MANDATORY RETIREMENT: RPI subjects (N=534) were asked if they perceived their decisions to retire as essentially voluntary or mandatory ones. About 87% of the employed subjects (excluding unemployed spouses) answered the question, 80% of them claiming the decision a voluntary matter. These data were gathered prior to the recently effective changes in rules about mandatory retirement.

(2) PROXIMITY TO RETIREMENT: RPI subjects (N=534) were asked about the perceived proximity to retirement, in terms of number of work-years remaining. Responses were observed regardless of attendance basis or employment status (spouse-homemakers included). Though only 71% of the participants were able to answer, the data are important: (a) a sizable 35% of these individuals were already within one year of retirement; (b) a total of 50% of them were within two years; and (3) 75% of them were within five years. Often, the programs conducted under this study were the first organized pre-retirement education events in the communities or employer settings involved. As has been seen generally, initial programming tends to encounter those closest to retirement, and that pattern has been replicated here.

(3) ANTICIPATED RETIREMENT AGE: In program/data cycle 3 (N=301), each individual was asked to indicate the age at which he or she planned to retire. Again, responses were observed regardless of attendance basis or employment status (spouse-homemakers included), and, again, exactly 71% of the subjects answered. Figure D-1 illustrates those data; certainly, the striking feature involves the 75% of subjects anticipating retirement prior to age 65.

Figure D-1. Anticipated Retirement Ages: Subject percents selecting retirement at various age points (seven age categories), program/data cycle 3 (1977-78)[1].



[1]71% of 301 subjects responding.

(4) HEALTH: Self-ratings of health status were asked of RPI subjects (N=534). Table D-9 shows the subject totals and percents in four rating categories, as well as the nearly identical response patterns for men and women separately. Almost 83% of these subjects rated their health as good or better. The outstanding characteristic of the data, however, is the commanding tendency of these respondents to define their health as "good," rather than as "excellent."

Table D-9. HEALTH - self-ratings of health status among RPI subjects, by men and by women, and combined.

Health Rating	Subject Totals Men	Subject Totals Women	Combined No.	Combined %
Poor	2	2	4	.8
Fair	41	42	83	16.4
Good	137	142	279	55.2
Excellent	72	67	139	27.5
	252	253	505[1]	99.9%

[1]95% of RPI subjects responding.

(5) HOME OWNERSHIP: In program/data cycles 1 and 2 (combined N=453), subjects were asked if they owned their homes. Ninety-eight percent of these subjects answered the question, and 94% of the respondents indicated that they were home-owners.

(6) ETHNIC DISTINCTIONS: It was not within the intent or authority of these programs to address ethnic considerations in their recruitment. Participants were engaged wherever program leaders were able to mount programs that would be attended. Asked routinely to indicate their ethnic backgrounds, 90% of the RPI subjects (N=534) identified themselves as Caucasian, and another 5% did not respond. Among the remainder, American Indian subjects constituted the largest single group at 1.3% of the total. Blacks and Asian-Americans each registered .6% of the total. All subjects of Mexican-American and other Spanish-speaking backgrounds composed only .2% of participants. The very small proportions of all minority populations did not develop statistically usable variables, and no further analysis based upon ethnicity was warranted.

Within these cohorts residing in the Pacific Northwestern US, who entered the work-force from the late 1920's to the early 1940's, one would expect to encounter a predominantly white representation. With respect to ethnic distinctions broadly by color, black residents tend to be concentrated in the region's few major urban areas; among the nearly 60% of the sample engaged in smaller cities and lower-density counties, one would not have expected a sizable proportion of black participants. In view of the independent program-

development paths followed by the 25 leaders, and because of the very small sample involved, only the most general of speculations can be applied to the question of why more blacks might not have been present in the metropolitan segment of the sample. With respect to ethnic distinctions by native culture, the North American sub-cultures traditionally visible in the region (American Indian, Eskimo, Chicano) remain apart from the primary culture by virtue of several occupational, geographic, economic, and institutional idiosyncrasies; within the cohorts involved here, one would not have expected to encounter these special populations to any notable degree.

Conclusion

The study subjects may be summarily described as follows:

(1) they are individuals 50 to 65 years of age;

(2) they are men in professional, managerial and skilled-blue-collar occupations, to a lesser extent in unskilled work;

(3) they are women in professional, sales, and clerical occupations, and to an important extent the unemployed homemaker-spouses of male "pre-retirees";

(4) they are relatively well educated, most having completed high school and a considerable proportion having experienced some post-high-school education;

(5) they are white, are married, own their homes, and rate themselves to be in good health;

(6) they expect to retire earlier than age 65, with work-related retirement income apart from Social Security benefits.

The subjects were found equally in urbanized and lower-density locales. Consistent with the region's population pattern, the bulk of the study sample was encountered in the states of Oregon and Washington, much smaller proportions in Idaho and Alaska; by special arrangement, a small number of subjects were also engaged in California.

APPENDIX B-1

Project:
A Research Study of Retirement Preparation Programs
Grant No. 5 R01 MH 23949
National Institute of Mental Health
Grantee Institution:
University of Oregon
College of Health, Physical Education, and Recreation
University of Oregon Center for Gerontology
Principal Investigator: Frances G. Scott, PhD.
Project Director: James H. Lynch, PhD.

Three Educational Methodologies in Pre-Retirement Planning Programs: A Study of Relative Effectiveness

by

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Introduction

As reviewed in Appendix A-1, the present research has been concerned with teaching/learning models applied in pre-retirement education, and specifically with the relative effectiveness of selected models. No body of literature addresses this particular question of differential effects related to educational method. Though general questions of program impact have been increasingly studied in recent years, very few investigations have undertaken to compare program methods in the terms of distinguishable teaching/learning processes. Atchley (1976) succinctly reviews the broader literature concerned with

pre-retirement education--with the supposed need for formal preparation for retirement, the important results that are increasingly attributed to such preparation, the limited scope of this education presently in reaching the needful population of pre-retirees, and so on. That his current and essential review of these matters makes no mention of issues of educational method suggests the largely unturned ground involved here.

In its present stage of development, pre-retirement education in any of its forms is a short-term and usually single-event experience in the life of the subject "pre-retiree." Regardless of related counseling or informational experiences, model distinctions are drawn only around the conduct of those educational events known as pre-retirement programs. Presently, the situation is such that, if one experiences this education at all, he or she encounters it only once--beyond age 50, most often within just five years of retirement, increasingly by employer sponsorship (or co-sponsorship with educational interests), normally extending over 12 to 18 hours of program time, and in any one of several forms (serial lecture programs, group discussion formats, day-long and multiple-day workshops, individual-study packages, and so on.).

As essential differences in educational method have been pointed out, three historical interests have converged on the question of program effectiveness: (1) earlier studies whose findings support the relationship between pre-retirement planning and post-retirement adjustment; (2) earlier studies showing important relationships among (a) attitudes toward retirement, (b) present planning behaviors, and (c) later retirement satisfaction; and (3) certain adult-education theory which argues the efficacy of assorted teaching/learning models, especially pertinent where impact upon attitudes and personal behavior is sought (Ash, 1966; Pyron and Manion, 1970; Greene et al, 1969; Manion, 1976). Broadly, the present study begins with the expectation that certain models better serve those learning objectives concerned with attitudinal and behavioral outcomes believed relevant to effective retirement planning. Educational method, then stands as the independent variable construct: three distinct teaching/learning models become the treatments being compared.

The Treatment Models

The idea of important differences in pre-retirement education methods was seized simultaneously in the present study and in a similar investigation at

the University of Southern California (Tiberi, Boyack and Kerschner, 1978). Both studies acknowledged the influence of Manion's (1972, 1974, 1976) arguments about the inappropriateness of traditional, pedagogical methods to the educational purpose at issue. Both studies sought evidence about the relative effectiveness of several different methods commonly applied in pre-retirement education. Subsequent to early work in these investigations, Lynch (1977) (included as Appendix C-1) provided a classification of models in terms of their distinguishing teaching/learning features, and the USC group adopted his distinctions and model names in its final report of findings about four methods:

> ...Lynch (1977) offers a framework for conceptualizing preretirement education programs in terms of distinguishable teaching/learning modes, modes which specify particular instructional models. Each mode is defined by its dominant information-generating orientation, any one of which develops an associated posture between the teacher and learner. For example, the traditional lecture mode defines a "presentation/audience" model. A model's label is descriptive of its process for presenting a specific content. Process specifies the infrastructure of a particular model, namely, the techniques for introducing, developing, and disseminating a specific content, and it implies a unique relationship between the learner and that content (Tiberi, Boyack and Kerschner, 1978[1]).

The list following summarizes the categories that have been of general interest in both of the mentioned investigations.

Teaching/Learning Mode	Models or Techniques
Individual/Resource Mode[1]	1. Programmed planning manuals. 2. "How-to" books. 3. Miscellaneous reading. 4. A-V media packages for self use. 5. Other independent-study types.
Unstructured Information Types[1/2]	
(a) Presentation/Audience Mode	The traditional serial-lecture format, though various media of presentation may be used.[1/2]
(b) Informal Stimulus/Discussion	Reading-discussion groups, for example, using topic-oriented but undirected discussion.[2]

[1]Model studied by Tiberi, Boyack and Kerschner (1978).
[2]Model studied in the present investigation.

Structured Stimulus/Discussion[1]	Traditionally directed discussion using case studies, audio-visual stimuli, workbooks, guest speakers, and so on.
Facilitated Interaction Group[1/2]	A facilitator-led small-group model emphasizing interaction and mutuality, and approaching content in a developmental (rather than segmented) process.
Multi-group Workshop Mode[2/3]	A large-audience model using several leaderless small-groups in an integrating workshop process.

In summary, the USC group reported findings about examples of an individual/resource (or, "self-study") model, a traditional lecture series, a facilitated interaction group, and a stimulus/discussion model.

In the present study, three treatment models were investigated. Because of their traditional popularity and obvious utility, unstructured information approaches (such as lecture programs) are indeed visible in pre-retirement education broadly. For that reason, additionally stimulated by assorted implications in the USC findings, these approaches were observed further here. The facilitated interaction group pioneered at the University of Oregon, was the touchstone of the study and remained one of the models of primary interest--an interest that was intensified by the important conclusions regarding this approach in the USC findings. An innovation mid-way in the study, the multi-group workshop approach sought to combine the very desirable qualities of the facilitated interaction model with the economy of a large-audience format--a point of considerable interest to organizations planning the sponsorship of programs for clients or employees. The following material amplifies methodological features which distinguish the three treatment models (from Appendix A-1). Across all three methods extended the additional question of whether or not short-term training could effectively prepare potential leaders from diverse backgrounds and settings; the question was especially raised by what were viewed as the more sophisticated leadership demands of such methods as

[1]Model studied by Tiberi, Boyack and Kerschner (1978).
[2]Model studied in the present investigation.
[3]This model has also been recently reported on by Owen (1979).

the facilitator-led small group and the multi-group workshop. In a separate study, Owen (1979) recently addressed this training issue.)

1. Unstructured Informational (UI) Models: Traditional serial programs using guest lecturers and informal reading-discussion models were the variations observed. These models are allied in the present schema along the following lines:

(a) The process is segmented rather than developmental--that is, topics, issues, and so on are not consistently linked to an organizing principle (such as a planning model) that is set out in the beginning and returned to systematically as a developing definition of the subject under study;

(b) Participation of the audience is not structured or formally guided; indeed, in the case of the traditional presentation/audience types, it may be absent completely;

(c) Segmented content is tied to conventional informational techniques--such as the lecture in the presentation series, or the written material in the reading-discussion model.

The traditional lecture series needs no further definition. The reading-discussion model also depended upon serial meetings, organized around a sequence of readings; the method was applied among smaller groups--a group assembling once weekly to "discuss" the week's reading. Though rudimentary interaction among participants is obviously a feature of the method, the process was not guided or structured. Leaders served primarily as program coordinators, organizing the program events but not taking leadership of the meetings. Some programs included two small groups meeting simultaneously but independently. It is in the segmented nature of the process, especially, that methods here remain distinct from those in the remaining categories.

Unstructured informational models were followed only during the first two cycles of programming.

2. Facilitated Interaction (FI) Group: The method is defined as a "structured" process for a small group, actively led by a facilitator trained in the group-education techniques applied. The present study was, in fact, stimulated by innovations in this category at the University of Oregon beginning in 1969, and the theoretical and practical arguments that pertain were amply set out in the original proposal. Moreover, the concept has occupied a critical position in the recent history of pre-retirement education--especially as revealed in the results of its examination in other, similar research at the University of Southern California (Tiberi, Boyack and Kerschner, 1978). Important in both that and

the present study was the belief that the leadership skills required could be transmitted via short-term training, to appropriate candidates from a diverse range of sites where pre-retirement education might be initiated.

The method served as a touchstone in the present study: It was the only one demonstrated in all three training events, and subsequently applied by leaders in all three cycles of programming.

3. Multi-Group (MG) Workshop: An important application innovated after the project's beginning, the multi-group workshop concept was integrated into the research interest in the second and third years of program/data activity. The concept extends certain philosophical principles, teaching techniques, and major process features of the facilitated small-group method, within a broader workshop structure for larger audiences. Familiar in other subject-matters, the "workshop" arranges the audience in several small, leaderless groups, each with certain responsibilities for actualizing aspects of the educational experience; together, the groups come to represent a community of mutual interest, as the developmental structure of the process integrates the contributions of the several discussion units. The spirit and application of the method have since been fully detailed and demonstrated, in work at the University of Oregon (Lynch, 1978), at North Texas State University (Manion and Lynch, 1978), and at the University of British Columbia (Lynch and Riddell, 1979). It was recognized in the earliest experiments that the model preserved the most attractive qualities of the facilitated small-group method, while offering the economy of a large-audience format. The concept has, in fact, proved among the more immediately interesting ones to sponsor interests independent of the project, and it has already attracted additional study (especially, Owen, 1979).

Again, leadership requires one trained in group educational techniques, principles of andragogy, or similar foundations; often such a method is managed by a co-leading team, preferably consisting of a man and a woman. And, again, it was the belief of the project staff that appropriate candidates could be prepared for such leadership via short-term training. Demonstrations in workshop process were made a part of the second- and third-year training events, and programs of this type in the field were installed as a major feature of the third program/data cycle.

Level of Program Effort and Delivery Concomitants

Of the 43 programs conducted under this research (Appendix A-2), 33 of them occurred in the second and third program/data cycles within the framework of the central treatment-effects study. 534 pre-retirees entered these programs and completed the Retirement Preparation Indexes (RPI) pre-test. Table T-1 sets out subject totals, programs totals, and program enrollment levels for each of the three treatment groups.

Table T-1. Subject Totals, Program Numbers, and Program Enrollment Levels, by Treatment Mode - showing differential completion/attrition rates.

I. Treatment Subject Totals and Program Numbers.

	Treatment Mode[1]			
	UI MODELS 8 Programs	FI MODELS 13 Programs	MG MODELS 12 Programs	TOTAL 33 Programs
Entered programs and completed PRE-TEST questionnaire	163	120	251	534
Number/Percent completed programs	102/63%	105/88%	234/93%	441/83%
Number/Percent returned 3-month POST-TEST questionnaire	60/37%	90/75%	186/74%	336/63%
(%LOSS at 3-month follow-up)	(63%)	(25%)	(26%)	(37%)

II. Enrollment Levels Per Program.

	Treatment		
	UI	FI	MG
Average Number of Participants per Program:			
At entry (enrolled)	20.38	9.23	20.92
At conclusion (completed)	12.75	8.08	19.50
% retention	62%	88%	93%
(% loss)	(38%)	(12%)	(7%)

[1]UI = unstructured information types
FI = facilitated interaction groups
MG = multi-group workshops

Differences in Treatment N's. To an important degree, differences in data N's among the treatments at the point of enrollment must be regarded as artifacts of the methods, and thus as appropriate differences. The FI model, for example, is by design a small-group approach; each program of this type intends to enroll only eight to twelve participants. Thus, though FI led in

the number of programs completed, its N of subjects at pretest remained the smallest.

The UI types followed included both larger and smaller enrollment models: The lecture format observed is normally intended for larger groups; the informal reading-discussion method sought smaller, discussion-size enrollments. The total pretest figure reflects both that circumstance and the lower number of programs recorded in the category.

The MG method, with its large-group approach and a program rate comparable to the FI category, appropriately developed the largest subject total at pretest. In conclusion, then, differences seen in enrollment N's should be thought of as characteristic ones, whose effects would be integral to the broader concept of differences being explored.

Program Time Format Differences. Again, the treatment-effects study data were gathered over a period of two years, in two cycles of program/data activity. In the first of these years, where all of the UI programs took place, normal variations in time format were allowed. The result was that programs using lecture/audience method or reading-discussion groups met serially, usually in six to eight weekly meetings. FI groups were more likely to meet in time-intensive formats--such as a program of longer meetings over a shorter number of weeks (four three-hour meetings, for example), or in a weekend-long session (perhaps beginning on a Friday evening, and meeting during the day on Saturday and for a shorter period on Sunday). The serial UI formats were seen to use 1½ to 2 hours per session; thus these models, as well as the time-intensive FI formats, required about 10 to 13 hours overall.

It was subsequently argued that such time-intensive formats--which appear to be quite natural arrangements for FI and MG processes--are not feasible in the majority of potential program settings. In most cases, pre-retirees can assemble only for shorter meetings; furthermore, weekends are not seen by experienced leaders as an effective time for attracting participants. At the same time, it was thought that certain qualities of methods using interaction processes were enhanced by time-intensive formats--mutuality and interpersonal support, continuity and organization, and so on. In an attempt to accommodate the first, practical observation, while holding the overall framework as tight as possible, the final cycle of programming systematized both the FI and MG methods within a time format of four, three-hour, weekly meetings. (The time

of day was influenced by the program site: Programs held in employer facilities often met in afternoon sessions; those convened at the community colleges normally met in the evening.) Again, these models ran to 11 or 12 hours of total program time.

On the basis of this final round of programs, leaders and staff alike concluded that these interaction processes seemed to engage participants equally as well in the serial sessions as they had been known to do in more intensive time formats: Both of the models retained high levels of attendance (below), and leaders did not feel that their instructional processes were eroded by the week-long break between meetings. In their continuing work beyond this research, some leaders using interaction processes have been seen to extend the total program time to five sessions, primarily in order to incorporate guest-information features in the areas of legal affairs and personal health.

To conclude: The total amount of program time was consistent across all three treatment modes. Variations in time formats reflect variations found in actual practice. The large majority of programs employed some kind of serial format, with UI types running from six to eight sessions, the FI and MG models regularized at four sessions. A few of the FI and MG programs were observed in the more time-intensive formats.

Enrollment Stability. With respect to the stability of enrollments over the program terms, Table T-1 revealed that subject loss was negligible in two of the treatment models and severe in the third. The FI and MG groups suffered much smaller enrollment losses than did the UI category. The impact of this difference is especially evident in Table T-1-II, where attrition is presented in terms of average enrollments per individual program. As anticipated above, initial FI enrollments were distinctly the smaller of the three. Losses in the FI and MG groups amounted to less than 1½ participants per program, while UI attrition neared eight enrollees per program. In fact, most of the enrollment loss in these figures for the UI category developed in programs of the lecture/audience type. The fact that the informal reading-discussion model (though identified in the UI category as essentially informational and unstructured) suffered little attrition calls attention to the general characteristic it shares with the FI and MG types--the characteristic of participant interaction. Though the totals involved and the research circumstance do not allow

generalizing about the reading-discussion model itself, the broader inference about methods which employ participant-interaction processes seems fully warranted: These methods are more likely than passive participant methods to maintain stable attendance.

The Subjects

The 336 treatment subjects are pre-retirees who were encountered in 33 separate pre-retirement education programs, over a two-year period, principally in the Northwestern United States. Each of the programs was classified as an example of one of the three treatment types outlined above. As arranged for analysis, then, each treatment was represented by a pool of data from several programs of its respective type. By virtue of their participation in the programs, the pre-retirees also became subjects in the study (few declined to do so). Table T-2 summarizes essential demographic and descriptive information for that portion of the RPI subjects who ultimately completed the full pretest-posttest protocol (N=336) and for the added control subjects (N=58).

Table T-2. Characteristics of Pretest-Posttest Subjects, by Treatment and for Control Group: Distributions within eight characteristics shown as percents of subjects.

Characteristic	(1)[a]	2[b] (N=60)	3[c] (N=90)	4[d] (N=186)	5[e] (N=58)
Sex	(99%)				
Male		42%	46%	51%	17%
Female		58%	54%	49%	83%
Marital Status	(99%)				
Married		93%	82%	84%	67%
All Single		7%	18%	16%	33%
Age	(99%)				
Under 50		20%	18%	36%	51%
50 - 60		44%	42%	35%	32%
Over 60		36%	40%	29%	17%
Locale Type	(90%)				
Metropolitan		27%	32%	58%	45%
Smaller Urban Center		5%	26%	19%	50%
Small Town and Rural		68%	43%	23%	5%

Table T-2. Continued

Characteristic	(1)[a]	2[b] (N=60)	3[c] (N=90)	4[d] (N=186)	5[e] (N=58)
Health	(85%)				(*)
Excellent		23%	28%	34%	
Good		48%	61%	55%	
Fair		28%	11%	11%	
Poor		...	...	...	
Annual Income	(97%)				(**)
Less than $25,000		81%	75%	52%	
More than $25,000		19%	25%	48%	
(control group only) Less than $30,000					70%
More than $30,000					30%
Education	(99%)				
Less than high school grad		14%	11%	4%	9%
High-school grad or some college		74%	67%	62%	71%
College baccalaureate degree		7%	8%	18%	10%
Graduate work or advanced degree		5%	14%	16%	10%
Occupation	(95%)				(**)
Homemaker		24%	10%	15%	26%
Executive/Professional/Self-employed		10%	28%	31%	
Manager/Supervisor		18%	17%	15%	
Technical/Craft		14%	10%	12%	
Sales/Service/Clerical		14%	23%	18%	
All other blue collar		20%	12%	9%	21%
(control group only) white collar		...	...	...	53%

[a]Percent of subjects reporting; combined treatment-control N=394.
[b]UI treatment subjects.
[c]FI treatment subjects.
[d]MG treatment subjects.
[e]Control group: Amounts may differ from those reported by Tiberi, Boyack and Kerschner (1978), because of the addition in the present data of several control questionnaires returned after those investigators had completed their analysis. (*) Health item unreported. (**) Classification scheme differs.

Gross trends in the distributions of characteristics are repeated in all treatment groups (Table T-2). Patterns of sex, age, and education are nearly identical. Variations in the cases of marital status and health are noticeable. Greater differences across groups are seen in locale type, annual income, and occupation. Differences between the treatment groups and the control group are sharp in several instances. At this point, the intent is only to acknowledge these important matters of distribution differences: The problem of

differentially distributed characteristics is specifically addressed by features of the statistical model used in analysis (below).

The demography of the study sample was fully drawn out in Appendix A-2, and the description of the treatment-effects subjects may be summarized in terms of the conclusions to that section. The subjects are individuals who were 50 to 65 years of age. The men were more predominantly situated in professional, managerial, and skilled-blue-collar occupations, and to a lesser extent in unskilled labor. The women were found in professional and clerical occupations, and to an important extent as the unemployed homemaker-spouses of male participants. The subjects were relatively well educated, most having completed high school and a considerable proportion having experienced some post-high-school education. They were largely white, were overwhelmingly married, owned their own homes, and rated their health as good or better. They expected to retire earlier than age 65, most with work-related retirement income apart from Social Security benefits. The majority of subjects lived in Oregon and Washington, smaller proportions in Idaho, Alaska, and California.

Methodology

It is possible at this point to summarize the research circumstances as follows: Over a period of two years, participants in pre-retirement education programs provided pretest-posttest data to the study via the Retirement Preparation Indexes (copies of the questionnaires included as Appendix C-3). The participants in these programs thus became the subjects in the study, observed as representing three different treatment models applied in their pre-retirement education programs. The posttest measure was taken at a point three months after the completion of treatment. The 336 subjects who completed the pretest-posttest protocol constituted 63% of the individuals who originally entered the 33 programs involved, and an impressive 76% of those who completed the programs (see Table T-1). To these data was added a control group of 58 subjects who had wanted to attend such programs offered in a companion study (Tiberi, Boyack and Kerschner, 1978) but were unable to do so: these subjects had been measured in the same pretest-posttest protocol, without benefit of treatment--but at a point about three years prior to the measurements of the treatment subjects here. Essentially, the control group was the same one (with the addition of a few cases gained from late-returning questionnaires) used in the cited study, which innovated the instrumentation and data-analysis

procedures adopted here. Without question, the control-group feature admits to certain weaknesses.

Viewed first in experimental terms, the situation most closely approximated a variation of non-equivalent control-group design. Campbell and Stanley's (1963) "Design 10" is the essential discussion of this quasi-experimental, pretest-posttest form. Treatment and control groups are used, but they are not presumed to share pre-experimental sampling equivalence. In Design 10, the groups are viewed as naturally assembled "collectives" (such as classrooms) which are as similar as possible. The design assumes that the investigator is in control of the assignment of collectives to experiemental or control status, and can thus accommodate a random-assignment condition.

If we think of the 33 programs here as self-selected, assembled collectives, it is clear that the subjects so assembled in order to receive the education (treatment) offered; thus all of the 33 groups were pre-defined as treatment groups. Various common procedures for deriving corresponding control subjects were not functional in the field, specifically because of the diversity of conditions under which the treatment agents recruited and assembled their subjects (see Appendix A-1).

These circumstances do not fully satisfy the prerequisites of Design 10 regarding random assignment of collectives to control or treatment status (and, in this case, what would be a presumption of random assignment of subjects among the treatment models). Though we might continue to argue the design as a weakened but viable form of non-equivalent control-group method, a more reasonable view moves the conception to that of a rigorous program-evaluation procedure, as applied by Tiberi, Boyack and Kerschner (1978), and in a subsequent variation by Owen (1979).

Of course, the subject information introduced above foreshadowed the threat to inference that results from non-random assignment of subjects among the comparison groups: Subject characteristics were seen to be unequally, or differentially, distributed across the groups. Non-random assignment, and the associated conditions of differential selection and attrition, produce this kind of biasing in the data. The circumstance is an acknowledged reality in the kind of program-evaluation research envisioned here. The confounding effect takes the form of significant correlations between the unequally

distributed subject characteristics and the outcome measures. The situation, then, requires statistical adjustments to counter two general threats: (1) the fundamental problem of regression toward the mean in repeated measures (pretest and posttest); and (2) the biasing effects of non-random assignment as discussed here. Tiberi, Boyack and Kerschner (1978) and Owen (1979) faced the same problem. In those studies as in this one, the response to the stated threats to valid inference has been a data-analysis model integrating several important features.

1. In regard to regression toward the mean, and its counfounding of the concept of a change-score, the most frequently used procedure involves partitioning out the error of variance related to pretest scores (removing the portion of the outcome measure that is a function of the initial score achieved, and insuring that independent variables are not correlated with the amount of gain simply because they are also correlated with initial score differences). The operation produces residual change scores (Cronbach and Furby, 1970; Dubois, 1957; Lord, 1962), or what Cohen and Cohen (1975) call regressed change scores. These residual scores offset the effects of initial score differences among subjects (or among groups of subjects, as viewed here) and are thus more likely to reflect treatment effects (Ellsworth, 1975).

2. With respect to the effects of differentially distributed subject characteristics that produce significant (artifactual) relationships with outcome measures, a further statistical procedure controls for these covariate effects by partitioning out the covariates. The procedure yields what in this and similar studies is called a corrected residual change score.

3. The progression of statistical corrections for threats to validity is cast within a multiple-regression model of inferential analysis, in which the highly refined outcome measures can be examined for the relative shares of variance represented--and thus can be interpreted as measures of relative effects of models tested. As applied here, multiple-regression concepts in inferential data-analysis have been most recently elaborated by Kerlinger and Pedhauzer (1973) and Cohen and Cohen (1975). Specific components of the model used are set out further on.

Certain points warrant recapitulation: First, a distinguishing feature of the methodology is its use of measurements of change in interpreting program

effectiveness. These measurements of change, in the form of statistically (rather than experimentally) leveled residual scores, ultimately take the position of dependent variables. The scores are entered in a multiple-regression analysis that develops comparisons among the treatments, and between each treatment and the control group, in terms of proportions of outcome-measure variance interpretable as effects of treatment.

Second, a vulnerability in the present study is acknowledged in the apparently "foreign" character of the control group. The controls do represent the general population of "pre-retirees" and were, in fact, persons who applied to attend pre-retirement programs in their communities but were unable to do so. However, the controls were all residents of Southern California, while the treatment subjects were predominantly residents of the Northwestern United States. In judging this matter, one should understand that the statistical procedure for correcting the residual change scores for unwanted effects of differences in subject characteristics has been applied to all of the comparison groups--that is, across all of the possible intergroup relationships, including those involving the control group. All data are present in the comparisons that are fundamental to the correction procedure. The procedure, then, attends not only to differences among the treatment groups, but also to differences between those groups and the control group.

Finally, essential procedures and interpretive framework have been effectively stated by Tiberi, and it will suffice to paraphrase one longer passage in summarizing the methodology (verb tenses and some terms have been rendered consistent with the present text).

> Treatment groups and the control group are made into dummy-coded vectors. Participant characteristics are made into effects-coded vectors. Treatment-model-X-participant-characteristic interactions are derived by multiplying dummy-coded by effects-coded vectors. Pre-test factor scores and those characteristics showing significant correlations with treatment models and outcome measures are regarded as covariates. Covariates, along with the dummy, effects, and interaction vectors, are entered hierarchically into the multiple-regression equation--the covariates partialling out the variance due to pretest and to unequal distribution of participant characteristics; the dummy vectors accounting for the remaining variance due to treatment effects; the effects vectors accounting for the remaining variance due to participant characteristics;

and the interaction vectors accounting for the remaining variance due to treatment-X-characteristic combinations.

The information yield from this analysis focuses on five statistics, all adjusting for covariate effects: (1) change-score mean values; (2) t-ratios testing for differences between control-group and treatment-group means; (3) partial correlation coefficients (pr) assessing the direction and strength of relationships between treatment models and outcome measures; (4) squared semipartial correlation coefficients (sr^2) assessing the proportion of outcome-measure variance attributable to particular treatment models; and (5) squared multiple correlation coefficients (R^2) assessing the proportion of outcome-measure variance accounted for by all models (total treatment effect), and by all treatment-X-characteristic interactions. Because pretest factor scores are used as covariates in deriving their corresponding outcome measures, these measures can be interpreted as indices of change--i.e., movement in either a positive or negative direction from the time of the pretest to the 3-month posttest. (Tiberi, Boyack and Kerschner, 1978).

Instrumentation. Pretest and posttest (3-month) questionnaires were developed upon the nine factors identified in Tiberi, Boyack and Kerschner (1978), and used in their study to assess treatment effects within a framework of three global attributes--behavior, knowledge (information), and attitudes--related to retirement and to appropriate planning for retirement (see Appendix A-1). The earlier investigators' analysis produced three viable factors related to each of the global attributes. These nine factors, along with the summed total-attribute scores (behavior, information, attitude) and a further summed composite score, were arranged and identified for the present study as the Retirement Preparation Indexes. Ultimately, the 13 pretest and 13 posttest scores were used to produce outcome measures to serve the analysis of treatment effects.[1]

Pretest questionnaires were completed by program participants on the program site, always at the first meeting and prior to any program-content

[1]For discussion of the item-development procedures, validity and reliability studies, and factor-analysis methods leading to the arrangement of the indexes for the desired measurement purpose, see Tiberi, Boyack and Kerschner (1978).

activity. In the majority of cases, administration of the questionnaires was either managed or monitored by project staff. Questionnaires were completed anonymously, but with a self-designed identification code on the part of each participant in order to insure pre/post matching of data. Participant rosters were gathered separately, to provide addresses for the mailing of posttests while maintaining the anonymity of participant responses. The 3-month posttests were then mailed directly to all pretest respondents at a point three months following the conclusions of their respective programs. The 13 indexes are listed below, showing the name assigned each one and associated abbreviations used in the remainder of this report. The brief definitions derive from Tiberi, Boyack and Kerschner (1978). Owen (1979) has adopted the same nomenclature.

a. Behavior Indexes.

Health Maintenance Behavior (HMB) - activities undertaken which enhance one's physical health.

Financial Planning Behavior (FPB) - assistance-seeking behavior for development of financial-resources information and retirement budget forecasting.

Community Activity Behavior (CAB) - behavior indicative of participation in community and other non-work-related occupations (volunteering, community service).

Total Behavior Attribute (TOBEHA) - summed behavior indexes.

b. Information Indexes.

Health Care Issues (HCI) - perceived knowledge of details of medical and hospital insurance, Medicare, Medicaid.

Financial Planning Issues (FPI) - perceived knowledge of relevant financial-planning information, decisions, resources, etc.

Psychological Adjustment Information (PAI) - perceived knowledge of emotional-health factors, adjustment challenges and strategies, and so on.

Total Information Attribute (TOINFO) - summed information indexes.

c. Attitude Indexes.

Pre-retirement Zest (PRZ) - an attitude suggesting healthy anticipation of retirement experiences.

Pre-retirement Optimism (PRO) - an attitude suggesting the rejection of old-age and retirement myths and stereotypes.

Functional Worth and Competence (FWC) - an attitude suggesting a determined, purposive life-style in retirement.

Total Attitude Attribute (TOATTI) - summed attitude indexes.

d. Composite Retirement Preparation Index (RPICOMP). The grand sum, variously, of the nine individual indexes or of the three Total Attribute Indexes.

Questionnaire Items and Factor Score Coefficients. The questionnaires themselves are included as Appendix C-3. Within the questionnaires (pretest and 3-month posttest forms), 37 items constitute the RPI. The items are thought of in three groups, each collection representing one of the global attributes (behavior, information, attitudes). For each item, factor-score coefficients have been developed on each of the three factors within the item's attribute. The nine sets of coefficients provide the basis for computing the nine index scores, the three summed attribute scores, and the RPI composite score. Tables T-3 through T-5 list the items in their respective attribute groupings and show the factor-score coefficients. The measurement mode in each case (e.g., Likert scale, category-selection) can be observed in the questionnaires themselves.

Table T-3. Factor Score Coefficients for Items Measuring Behavior (from Tiberi, Boyack and Kerschner, 1978).

Item	Factors		
	HMB[a]	FPB[b]	CAB[c]
Have you sought help in planning your retirement?	.01	.10	.03
If yes, in what areas and from whom?			
Legal affairs	-.01	.96	.02
Accountant	-.01	.01	.02
Lawyer	-.01	.03	-.04
Do you participate in any community or other nonwork related organizations?	.01	.05	.17

[a]Health maintenance behavior
[b]Financial planning behavior
[c]Community activity behavior

Table T-3. (Continued)

Item	Factors HMB	FPB	CAB
How many community or other nonwork related organizations do you participate in?	-.01	-.06	.22
How active are you in the organizations in which you participate?	.10	-.02	.61
About how many hours per week do you spend participating in volunteer activities?	-.01	-.03	.04
Do you follow any type of regular exercise program?	.84	.04	-.06
How often do you exercise?	.16	-.06	.01
Have you done any of the following?			
Experimented with living on a retirement budget?	.02	.01	-.01
Estimated my Social Security in retirement?	.01	.02	-.02
About how often do you and your spouse (or partner if not married) spend time alone with each other?	.02	.01	-.03
About how often do you and your spouse (or partner if not married) participate in social or leisure activities?	-.02	-.04	.03

Table T-4. Factor Score Coefficients for Items Measuring Knowledge (Information) (from Tiberi, Boyack and Kerschner, 1978).

Item	Factors HCI[a]	FPI[b]	PAI[c]
The difference between Medicare medical and Medicare hospital insurance	.25	-.11	-.01
How to deal with loneliness	-.02	.02	.20
The problems associated with being widowed	-.01	-.05	-.08
What services my Medicare medical insurance will pay for	.49	-.09	-.14

[a] Health care issues
[b] Financial planning issues
[c] Psychological adjustment information

Table T-4. (Continued)

Item	Factors HCI	FPI	PAI
How to figure my net worth upon retirement	-.17	.47	-.02
Employment opportunities for the retired	-.05	.09	.03
What services my Medicare hospital insurance will pay for	.30	-.11	.07
How to deal with boredom	-.06	-.07	.70
The changes to expect in my income upon retirement	-.08	.20	.02
How much money I can earn in retirement without losing any Social Security benefits	.02	.14	.01
The differences between Medicare and Medicaid	.16	-.03	.02
How to estimate the amount of Social Security I will receive	-.05	.34	-.07

Table T-5. Factor Score Coefficients for Items Measuring Attitudes (from Tiberi, Boyack and Kerschner, 1978).

Item	Factors PRZ[a]	PRO[b]	FWC[c]
Retired people are generally more lonely than nonretired people	-.01	.43	-.06
In general a person's health typically gets worse after they retire	.04	.34	.16
I expect retirement to be the best years of my life	.03	-.04	.10
Older people shouldn't exercise when they don't have to	.24	-.02	-.02
Sex is something that retired people are generally not interested in	.35	-.04	-.09
Most older people prefer not to get involved in community affairs	.12	.11	-.04

[a] Pre-retirement zest
[b] Pre-retirement optimism
[c] Functional worth and competence

Table T-5. (Continued)

Item	Factors PRZ	PRO	FWC
Retirement means not doing much of anything	.34	-.09	.11
The more education a person has the better they can plan for their retirement	-.02	.16	-.03
I need somebody to push me in order to accomplish the things I want	-.01	-.05	.41
I am looking forward to my retirement	-.03	.13	.07
The thought of growing old scares me	-.04	.01	.28

Analysis

Terms. The following terms and abbreviations are used repeatedly throughout the remainder of the paper.

(1) Index: Any one of the nine measures, or scales, which make up the Retirement Preparation Indexes (identified above as HMB, FPB, CAB, HCI, FPI, PAI, PRZ, PRO, FWC), or any one of the four summary measures (TOBEHA, TOINFO, TOATTI, RPICOMP).

(2) Index Variable: Any one of the 37 pretest/posttest questionnaire items that serve the RPI measurements concept (listed in Tables T-3, T-4, T-5).

(3) Pretest Index Score: A pretest mean-score value for any one of the 13 indexes.

(4) Posttest Index Score: A posttest (3-month) mean-score value for any one of the 13 indexes.

(5) Residual Change Score (RCS): The preliminary outcome measure, adjusted for error of variance associated with repeated measures, for any one of the 13 indexes.

(6) Corrected Residual Change Score (CRCS): The final outcome measure, corrected for influences of differentially distributed demographic covariates, for any one of the 13 indexes.

(7) Treatment, Treatment Mode, Treatment Type: Any one of the three different program methods being evaluated and compared (UI Types, FI Groups, MG Workshops). Treatment Group refers to the pool of subjects, or to the body of data, representing a particular treatment.

(8) Demographic Variable: Any subject characteristic of a demographic or descriptive nature--e.g., age, sex, income, marital status, locale type, health, occupation, education.

Sequence of Statistical Procedures. Statistical objectives have been set out above. The following material summarizes operational procedures serving those objectives.

(1) Development of Pretest and Posttest Index Scores: The 13 pretest and 13 posttest index scores are first developed for the combined data. Missing index data is routinely recoded to index-variable mean values, obtained from initial frequency-distribution analysis. Index computation for the core nine pretest and nine posttest indexes sums the variables applicable in each case, using the respective factor coefficients as the score weights (Tables T-3, T-4, T-5). Each of the three attribute-sets of indexes is subsequently summed internally to produce an index score for the respective total attribute measure (TOBEHA, TOINFO, TOATTI), and the three total attribute indexes are summed to produce the RPI composite measure (RPICOMP).

The 26 index means are the yield of interest here, as they become essential terms in the formulae for the respective residual change scores. It should be noted that the four summary indexes are created by an initial summing among the core indexes, and that thereafter they stand independently for the statistical corrections applied in the development of the residual change scores (RCS).

(2) Pearson correlation coefficients are produced for all pretest/posttest index relationships--e.g., HMBpre with HMBpost. The operation produces a second set of 13 terms required by the RCS formulae.

(3) Pearson correlation coefficients are produced for all posttest-X-demographic-variable combinations, pursuant to later considerations in the correction of the RCS's for effects of differentially distributed demographic variables.

(4) Residual Change Scores: Still with the combined data, a residual change score is computed for each of the 13 index measures. An exemplary formula for an index RCS could be written:

RCS = HMBpost - ((HMBpre-X-HMBpost)(HMBpre - HMBpreM))

HMB3 = HMB2-((r)(HMB1-M1))

The first term on the right refers to the posttest score involved; the next set to the correlation coefficient for the relationship between that score and its pretest counterpart; and the final set to the subtraction from the pretest score of the respective index (group) mean.

The 13 RCS's for the combined data are the first output called, as they will be required of formulae used in producing the final CRCS's. The next output calls for preliminary t-tests between RCS's of all sets of groups defined in the data--i.e., between each treatment group and the control group, and between all sets of treatment groups; the output reveals all of the group RCS's on all of the indexes, as well as the t-ratios and their probabilities.

In the present context, the relationships being observed in this kind of output are as follows:

UI/control	UI/FI
FI/control	UI/MG
MG/control	FI/MG

(5) Corrected Residual Change Scores: Where, in step 3 above, the significance test of the correlation yielded a $p < .10$ or lower, crossbreaks are constructed for viewing the distribution of the demographic variable across the matrix of groups (the control group and the three treatment groups, in this case). Where differential distribution is observed, the affected RCS must be submitted for correction (the involved demographic variable being entered into the correction formula). If we found income level significantly correlated with the HMB posttest mean, for example, and observed the variable to be differentially distributed (crossbreaks inspection), the formula for the respective CRCS (HMB Index) could be set out as follows:

CRCS = RCS minus ((correlation coefficient between income level and HMB2) times (individual income level minus group pretest mean income level))

In the case of each index-RCS requiring correction, the formula will attend to as many demographic variables as are determined to be covariates by the above tests.

(6) Pearson correlation coefficients are now produced for all CRCS-X-demographic-variable combinations, in order to observe the impact of the correction.

(7) A final set of t-tests, now between the CRCS's of all sets of groups defined (between each treatment group and the control group, and between all sets of treatment groups), is produced.

(8) Multiple Regression Analysis: The finally adjusted change scores for the 13 indexes are entered into the equation as the dependent variables. The treatment models, of course, are the independent variables. Estimates of the total treatment effect (from all models) is obtained by entering all treatments simultaneously into the equation. The resulting squared multiple correlation coefficient estimates the amount of variance accounted for by the combined treaments (the accompanying F-ratio testing the significance of that amount).

Stepwise regression is then performed with each treatment model entering the equation in all possible positions. Estimates of the strength and direction of the relationships between program models and outcome measures are obtained as the partial correlation coefficient available when the model entered the equation last. In addition, the squared semipartial correlation coefficient obtained via this same computation serves as a measure of the proportion of outcome-measure variance attributable to a specific treatment (also tested for significance using an F-ratio).

Presentation of Data. Data presented in this section are arranged as follows: The first sequence of tables is concerned with treatment-group/control-group comparisons among the four sets of mean-score values involved (pretest, posttest, RCS, CRCS). The second sequence of tables is concerned with the relative effects of the different treatment types, in terms of variance statistics provided by the multiple-regression analysis. A third set of tables supplies supplementary correlational information about the relationships among the factors upon which the measurements have been constructed.

The first sequence is set out in Tables T-6 through T-12, as follows:

(1) All observed index scores (pretest and posttest)--for all subjects, the control group, and each treatment group--are set out for inspection in Table T-6. These figures illustrate the overall character of the gains assessed by the RPI's, and they delineate the gains by treatment type for rudimentary comparisons.

(2) Comparisons of mean-score values (with t-tests) are shown for both the preliminary RCS's and the final CRCS's. Table T-7 shows the initial comparisons, by treatment. Tables T-9 and T-10 show the correlational data for the demographic covariates, where relationships (RCS--characteristic) have been submitted for correction; the leveling effects of the

correction are seen in Table T-10. Table T-11 shows the final comparisons by treatment type using the CRCS's. Finally, Table T-12 assembles the RCS's and CRCS's for all treatment groups for summary inspection. Also for inspection purposes, the correlation coefficients in Table T-8 have been included to illustrate the consistent thrust of the relationships between the RCS's, on the one hand, and the pretest and posttest index scores, on the other.

The second sequence mentioned is set out in Tables T-13 through T-17. The data provide a framework for comparing program models in terms of proportions of outcome-measure variance attributable to them respectively.

(1) Tables T-13, T-14, and T-15 arrange these statistics for the three sets of indexes represented by each of the global attributes (behavior, information, attitude). Each table shows the pertinent statistics for the three indexes subsumed, as well as for the total attribute index.

(2) Table T-16 adds the variance statistics for the RPI Composite outcome measure (RPICOMP). Mean-score values and t-values are re-assembled here to provide a complete picture of the statistics relevant to comparative interpretation of the composite outcome measures, by treatment.

(3) Table T-17 offers summary statistics from a separate examination of the two most powerful treatment models--the FI Groups and MG Workshops.

The supplementary interfactor correlational data are presented in Tables T-18 through T-21.

(1) Table T-18 presents interfactor Pearson coefficients for the nine core RPI factors (computed upon the pretest data of the 394 subjects in the treatment-effects study) and test-retest coefficients (computed with the pretest-posttest data of the same 394 subjects).

The entire collection of tables is now presented without textual interruption.

Table T-6. Pretest and Posttest Index Scores (Mean Values) - all indexes by treatment mode and combined.

	All S's		Control Group		Treatment Mode: UI Types		FI Groups		MG Workshops	
Index	pre	/ post	pre	/ post	pre	/ post	pre	/ post	pre	/ post
HMB	1.99	2.06	1.79	1.71	1.99	2.07	2.04	2.15	2.02	2.11
FPB	0.97	1.11	1.03	1.01	.93	1.10	.97	1.12	.95	1.14
CAB	2.25	2.21	1.81	1.81	2.43	2.29	2.19	2.13	2.36	2.34
TOBEHA	5.20	5.37	4.63	4.54	5.35	5.46	5.21	5.39	5.33	5.60
HCI	1.28	1.69	1.31	1.62	1.52	1.79	1.34	1.89	1.16	1.58
FPI	2.40	3.09	2.35	2.75	2.49	3.39	2.34	3.10	2.42	3.09
PAI	2.53	2.86	2.70	2.82	2.49	2.68	2.45	2.89	2.53	2.91
TOINFO	6.21	7.64	6.36	7.20	6.50	7.86	6.13	7.88	6.11	7.59
PRZ	4.19	4.32	4.07	4.20	4.15	4.15	4.12	4.33	4.28	4.40
PRO	2.49	2.67	2.55	2.48	2.44	2.60	2.44	2.64	2.52	2.77
FWC	3.29	3.30	3.23	3.24	3.26	3.31	3.36	3.27	3.27	3.34
TOATTI	9.97	10.29	9.85	9.92	9.85	10.05	9.92	10.23	10.08	10.51
RPICOMP	21.39	23.30	20.83	21.65	21.70	23.37	21.26	23.50	21.52	23.69

Table T-7. Preliminary Comparison of Treatments with Control Group - using uncorrected residual change scores (RCS), for all indexes.

	All S's	Control	Treatment Mode: UI Types		FI Groups		MG Workshops	
Index	M[1]	M[1]	M[1]	t	M[1]	t	M[1]	t
HMB	2.06	1.83	2.07	2.16*	2.11	2.93*	2.09	2.92*
FPB	1.11	1.00	1.11	1.91#	1.12	2.48*	1.15	3.45***
CAB	2.21	2.11	2.17	.46	2.17	.61	2.27	2.08*
TOBEHA	5.37	4.89	5.37	2.58*	5.39	3.29***	5.52	4.42***
HCI	1.69	1.61	1.64	.23	1.85	1.44	1.65	.32
FPI	3.09	2.78	3.35	3.69***	3.13	2.41*	3.08	2.40*
PAI	2.86	2.75	2.70	- .44	2.93	1.67#	2.92	1.79#
TOINFO	7.64	7.11	7.69	2.41*	7.93	3.45***	7.65	2.78**
PRZ	4.32	4.26	4.17	-1.14	4.36	1.35	4.36	1.37
PRO	2.67	2.46	2.63	1.37	2.66	1.87#	2.77	3.10*
FWC	3.29	3.25	3.30	.51	3.22	- .37	3.33	1.11
TOATTI	10.29	9.98	10.11	.70	10.26	1.60	10.45	2.95**
RPICOMP	23.30	22.00	23.17	2.98**	23.58	4.43***	23.61	5.10***

[1]Mean values adjusted for error of variance (RCS).

#p < .10
*p < .05
**p < .01
***p < .001

Table T-8. Correlation Coefficients: Residual Changes Scores (RCS) with Pretest Index Scores and Posttest Index Scores - Treatment Effects Study Subjects (N=394).

Index	Pearson r's: residual change scores with Pretest	Posttest
HMB	.029	.810
FPB	.084	.991
CAB	.071	.673
TOBEHA	.085	.836
HCI	.036	.827
FPI	-.062	.836
PAI	-.105	.851
TOINFO	-.026	.785
PRZ	-.003	.881
PRO	.014	.892
FWC	-.084	.856
TOATTI	.017	.876
RPICOMP	.028	.797

Table T- 9. Review of Correction for Effects of Differentially Distributed Demographic Variables on Residual Change Scores (RCS) - Correlation Coefficients and Probabilities before correction.

	Demographic Variable							
	Age	Health	Sex	Education	Occupation	Income	Locale	Marriage
Index	r/p[a]	r/p	r/p	r/p	r/p	r/p	r/p	r/p
HMB	.125/.014	.114/.023	-.092/.068		-.132/.011	.103/.002		
FPB	.090/.073			.088/.083		.179/.000	-.088/.097	
CAB					-.105/.043			
HCI		.124/.014			-.139/.007			
FPI	.110/.030						.091/.089	
PAI		.116/.021						.130/.010
PRO			-.114/.024			.163/.001		-.109/.032
TOBEHA	.104/.040	.140/.005	-.110/.029	.090/.076	-.174/.001	.154/.002	-.094/.078	
TOINFO		.138/.006			-.110/.034		.141/.008	
TOATTI		.084/.095	-.133/.008			.094/.065		
RPICOMP	.091/.073	.169/.001	-.108/.033		-.141/.006	.131/.010		

[a]The probabilities (p=specific probability of observing the indicated degree of correlation by chance alone) are shown in this manner to illustrate the full impact of the correction (see Table T-10). All relationships with chance-probabilities up to .10 were submitted for correction, where inspection of crossbreaks showed the characteristic to be differentially distributed among the treatment/control cells.

Recapitulation of Interactions

Demographic Variable	Index
Age	HMB, FPB, FPI, TOBEHA, RPICOMP
Health	HMB, HCI, PAI, TOBEHA, TOINFO, TOATTI, RPICOMP
Sex	HMB, PRO, TOBEHA, TOATTI, RPICOMP
Education	FPB, TOBEHA
Occupation	HMB, CAB, HCI, TOBEHA, TOINFO, RPICOMP
Income	HMB, FPB, PRO, TOBEHA, TOATTI, RPICOMP
Locale Type	FPB, FPI, TOBEHA, TOINFO
Marital Status	PAI, PRO

Table T-10. Review of Correction for Effects of Differentially Distributed Demographic Variables on Residual Change Scores (using CRCS) - Correlation Coefficients and Probabilities after correction.

	Demographic Variable							
	Age	Health	Sex	Education	Occupation	Income	Locale	Marriage
Index	r/p[a]	r/p	r/p	r/p	r/p	r/p	r/p	r/p
HMB	.031/.538	-.007/.884	.021/.676		.005/.918	-.005/.917		
FPB		.010/.850		.001/.978		.074/.144	-.006/.905	
CAB					.006/.910			
HCI		.062/.219			-.012/.808			
FPI	.006/.900						-.007/.895	
PAI		-.018/.714						.049/.329
PRO			.015/.760			.013/.796		-.086/.909
TOBEHA	.027/.600	-.035/.492	-.006/.903	-.040/.434	.027/.588	-.021/.683	.045/.369	
TOINFO		.080/.115			-.008/.875		.078/.125	
TOATTI		.011/.834	-.053/.292			.023/.643		
RPICOMP	.040/.426	.016/.759	-.063/.215		-.067/.183	.074/.144		

[a]See footnote to Table T-9.

Recapitualtion of Interactions

Demographic Variable	Index
Age	HMB, FPB, FPI, TOBEHA, RPICOMP
Health	HMB, HCI, PAI, TOBEHA, TOINFO, TOATTI, RPICOMP
Sex	HMB, PRO, TOBEHA, TOATTI, RPICOMP
Education	FPB, TOBEHA
Occupation	HMB, CAB, HCI, TOBEHA, TOINFO, RPICOMP
Income	HMB, FPB, PRO, TOBEHA, TOATTI, RPICOMP
Locale Type	FPB, FPI, TOBEHA, TOINFO
Marital Status	PAI, PRO

Table I-1. Final Comparison of Treatments with Control Group - using residual change scores (CRCS) corrected for demographic covariates, for all indexes.

			Treatment Mode					
	All S's	Control	UI Types		FI Groups		MG Workshops	
Index	M[1]	M[1]	M[1]	t	M[1]	t	M[1]	t
HMB	2.05	1.97	2.07	.89	2.09	1.25	2.06	.97
FPB	1.11	1.04	1.14	1.72#	1.12	1.75#	1.12	1.91*
CAB	2.21	2.15	2.17	.14	2.17	.19	2.26	1.47
TOBEHA	5.37	5.19	5.44	1.44	5.38	1.27	5.41	1.59
HCI	1.69	1.72	1.65	- .44	1.84	.70	1.62	- .75
FPI	3.09	2.82	3.28	3.03**	3.09	1.81#	3.11	2.26*
PAI	2.86	2.81	2.72	- .80	2.91	.93	2.89	.88
TOINFO	7.64	7.27	7.64	1.56	7.89	2.63**	7.63	1.88#
PRZ	4.31	4.26	4.17	-1.14	4.36	1.35	4.36	1.37
PRO	2.67	2.55	2.64	.65	2.67	1.06	2.72	1.74#
FWC	3.29	3.25	3.30	.51	3.22	- .37	3.33	1.11
TOATTI	10.29	10.11	10.13	.13	10.25	.83	10.41	1.91*
RPICOMP	23.30	22.47	23.20	1.83#	23.50	2.89**	23.50	3.26***

[1]Mean values adjusted for error of variance and for covariates (CRCS).

#p < .10
*p < .05
**p < .01
***p < .001

Table T-12. Summary Comparison of RCS and CRCS - showing mean values[1] before and after correction for effects of differentially distributed demographic covariates, for all indexes, by treatment mode and combined.

			Treatment Mode					
	All S's		UI Types		FI Groups		MG Workshops	
Index	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
HMB	2.06	2.05	2.07*	2.07	2.11*	2.09	2.09*	2.06
FPB	1.11	1.11	1.11	1.14	1.12*	1.12	1.15**	1.12*
CAB	2.21	2.21	2.17	2.17	2.17	2.17	2.27*	2.26
TOBEHA	5.37	5.37	5.37*	5.44	5.39**	5.38	5.52**	5.41
HCI	1.69	1.69	1.64	1.65	1.85	1.84	1.65	1.62
FPI	3.09	3.09	3.35**	3.28**	3.13*	3.09	3.08*	3.11*
PAI	2.86	2.86	2.70	2.72	2.93	2.91	2.92	2.89
TOINFO	7.64	7.64	7.69*	7.64	7.93**	7.89**	7.65**	7.63
PRZ	4.32	4.31	4.17	4.17	4.36	4.36	4.36	4.36
PRO	2.67	2.67	2.63	2.64	2.66	2.67	2.77*	2.72
FWC	3.29	3.29	3.30	3.30	3.22	3.22	3.33	3.33
TOATTI	10.29	10.29	10.11	10.13	10.26	10.25	10.45**	10.41*
RPICOMP	23.30	23.30	23.17**	23.20	23.58**	23.50**	23.61**	23.50**

[1]Refer to Tables T-7 and T-11 for t values.
[a]Residual Change Score (RCS), before correction for demographic covariates.
[b]Corrected Residual Change Score (CRCS).
*Change score significantly higher than control group at $p < .05$.
**Change score significantly higher than control group at $p < .01$.

Table T-13. Proportion of Variance in Behavior Indexes Accounted for by Respective Treatments.

Treatment	Health Maintenance (HMB)		Financial Planning (FPB)		Community Activity (CAB)		Total Behavior (TOBEHA)	
	pr[a]	sr^{2}[b]	pr	sr^2	pr	sr^2	pr	sr^2
UI Types	.0532	.0028	.0699	.0049	.0087	.0001	.0820	.0067
FI Groups	.0729	.0053	.0671	.0045	.0098	.0001	.0670	.0045
MG Workshops	.0591	.0035	.0728	.0053	.0721	.0052	.0886	.0078
Total treatment variance (R^2)[c]		.0056		.0066		.0092		.0090

[a]Partial correlation coefficient controlling for covariates.
[b]Proportion of outcome measure variance accounted for by specified treatment.
[c]Proportion of outcome measure variance accounted for by all treatments.
*p < .05.
**p < .01.

Table T-14. Proportion of Variance in Information Indexes Accounted for by Respective Treatments.

Treatment	Health Care (HCI)		Financial Planning (FPI)		Psychological Adjustment (PAI)		Total Information (TOINFO)	
	pr[a]	sr^{2}[b]	pr	sr^2	pr	sr^2	pr	sr^2
UI Types	-.0214	.0004	.1517	.0230**	-.0410	.0017	.0789	.0061
FI Groups	.0377	.0014	.0950	.0089	.0494	.0024	.1430	.0204**
MG Workshops	-.0369	.0014	.1162	.0134*	.0443	.0020	.0927	.0085
Total treatment variance (R^2)[c]		.0090		.0237*		.0118		.0205*

[a]Partial correlation coefficient controlling for covariates.
[b]Proportion of outcome measure variance accounted for by specified treatment.
[c]Proportion of outcome measure variance accounted for by all treatments.
*p < .05.
**p < .01.

Table T-15. Proportion of Variance in Attitude Indexes Accounted for by Respective Treatments.

Treatment	Pre-retirement Zest (PRZ)		Pre-retirement Optimism (PRO)		Functional Worth and Competence (FWC)		Total Attitude (TOATTI)	
	pr[a]	sr^{2}[b]	pr	sr^2	pr	sr^2	pr	sr^2
UI Types	-.0519	.0026	.0351	.0012	.0290	.0008	.0063	.0000
FI Groups	.0651	.0042	.0542	.0029	-.0191	.0004	.0410	.0016
MG Workshops	.0710	.0050	.0876	.0077	.0545	.0030	.0992	.0098
Total treatment variance (R^2)[c]		.0225*		.0083		.0089		.0152

[a]Partial correlation coefficient controlling for covariates.
[b]Proportion of outcome measure variance accounted for by specified treatment.
[c]Proportion of outcome measure variance accounted for by all treatments.
*p < .05.
**p < .01.

Table T-16. Composite Outcome Measure (RPICOMP) - CRCS mean values by treatment mode, and proportion of variance accounted for by respective treatments.

Treatment	M[a]	t[b]	pr[c]	sr^{2}[d]
UI Types	23.20	1.83	.0947	.0088*
FI Groups	23.50	2.89**	.1458	.0211**
MG Workshops	23.50	3.26***	.1624	.0263**
Control Group	22.47	---	---	---
Total	23.30	---	---	.0290*[e]

[a]Mean values adjusted for covariates.
[b]t-ratios between treatment-modes and control group.
[c]Partial correlation coefficient controlling for covariates.
[d]Proportion of outcome measure variance accounted for by specified treatment-mode.
[e]Proportion of outcome measure variance accounted for by all treatments (R^2).
*p < .05.
**p < .01.
***p < .001.

Table T-17. Cycle-3 Subjects Only (1977-78): Proportion of Variance in Total and Composite Outcome Measures Accounted for by Respective Treatments.

Treatment	Total Behavior (TOBEHA)		Total Information (TOINFO)		Total Attitude (TOATTI)		RPI Composite (RPICOMP)	
	pr[a]	sr^2[b]	pr	sr^2	pr	sr^2	pr	sr^2
FI Groups (N=68)	.18	.0292*	.17	.0299*	.08	.0056	.27	.0485**
MG Workshops (N=130)	.30	.0926***	.14	.0207*	.13	.0176	.32	.1006***
Total treatment variance (R^2)[c]		.0929**		.0322*		.0176		.1017**

[a]Partial correlation coefficient controlling for covariates.

[b]Proportion of outcome measure variance accounted for by specified treatment.

[c]Proportion of outcome measure variance accounted for by all treatments.

*p < .05.
**p < .01.
***p < .001.

Table T-18. Interfactor and Test-Retest Pearson Correlation Coefficients - Nine Retirement Preparation Indexes (factors).

Analysis		Factors								
		HMB	FPB	CAB	HCI	FPI	PAI	PRZ	PRO	FWC
Interfactor Correlations[a]	HMB	...	-.18**	.07	.07	.16**	.14**	.12**	.01	.05
	FPB			-.08	-.02	.04	-.06	-.09*	-.03	-.12*
	CAB				.03	.01	.16**	.09*	.03	.12**
	HCI					.01	-.08	.02	.06	.00
	FPI						-.03	.05	.03	.17**
	PAI							.15**	.07	.22**
	PRZ								.12**	-.02
	PRO									.10*
	FWC									...
Test-Retest Correlations[b]		.61**	.21**	.69**	.59**	.50**	.43**	.47**	.47**	.44**

[a]Analysis used pretest index scores; N=394.

[b]Time span: program term plus three months (term for most programs = four to six weeks); N=394.

*p < .05

**p < .01

Table T-19. Inter-Index Correlation Coefficients among Behavior Measures (HMB, FPB, CAB, TOBEHA, and RPICOMP) - pretest data (N=394).

	HMB	FPB	CAB	TOBEHA	RPICOMP
HMB	...	-.18**	.07	.63**	.41**
FPB			-.08	.06	-.04
CAB				.78**	.41**
TOBEHA					.56**

*p < .05
**p < .01

Table T-20. Inter-Index Correlation Coefficients among Information Measures (HCI, FPI, PAI, TOINFO, and RPICOMP) - pretest data (N=394).

	HCI	FPI	PAI	TOINFO	RPICOMP
HCI	...	.01	-.08	.63**	.45**
FPI			-.03	.62**	.50**
PAI				.42**	.44**
TOINFO					.81**

*p < .05
**p < .01

Table T-21. Inter-Index Correlation Coefficients among Attitude Measures (PRZ, PRO, FWC, TOATTI, and RPICOMP) - pretest data (N=394).

	PRZ	PRO	FWC	TOATTI	RPICOMP
PRZ	...	.12**	-.02	.53**	.35**
PRO			.10*	.73**	.38**
FWC				.58**	.42**
TOATTI					.62**

*p < .05
**p < .01

Discussion

Tables T-6 through T-12 show the generally positive direction of the outcome measures, as well as the rigor of the corrections applied in the interests of statistical control for validity. A simple inspection of pre-test-posttest data (Table T-6) reveals that nearly all posttest measures among treatment groups showed improved scores. With one exception (CAB), scores declined or remained unchanged only in isolated treatment-index combinations (UI-PRZ, FI-FWC). The case of CAB, wherein scores declined for all treatment types, remains inexplicable. However, an examination of the items which load the measure (Table T-3), suggests their self-evaluative content. The investigators speculate that the pretest encounter with such items could elicit an inflated rating, as a function of the implied self-assessment, and that the posttest encounter might tap a more relaxed and honest response. The possibility of this change is explained by the belief that subjects do become more realistic and more congruous as a result of the program experience, and thus that they need less to posture against the threat of reduced worth.

Some treatment-control comparisons in the Table T-6 data are also worth observing. In the behavior indexes, control scores remained unchanged or declined in all cases. In contrast to that circumstance, control scores in the information indexes improved in all cases. We would expect control subjects to be exposed routinely to information about retirement during the pre-post time span; furthermore, we would expect them, as an effect of their pretest experience, to be more conscious of such information. The uniformly improved scores in the information indexes, then, fall in line with normal expectations. In doing so, however, they call attention to the fully contrasting trend in the behavior indexes. The idea of such differences in the control data points up the synthetic character of the total attribute measures (behavior, information, attitudes), and it alerts investigators to questions about the position (relative strength) of each attribute in interpretations of composite outcome-measure statistics for treatment groups.

For the composite outcome measure (RPICOMP), for example, Table T-16 shows that the total amount of variance attributable to the combined treatments (total treatment effect) proved statistically significant. Inspection of the final CRCS data in Table T-11 shows that the primary component of that

significant result would seem to be information--specifically, financial information. Abandoning the attribute set for the broader topic set (e.g., health, finances), we see that the financial factors in both the behavior and information attributes are accounting for the bulk of the measured change. Only in the case of the MG treatment does a significant attitudinal outcome also figure in the robust composite result. These very general observations are made here simply to call attention to the different interpretive sets that inhere in the data.

Tables T-7 and T-8 introduce the residual change scores (RCS's), which reflect the statistical adjustment made to partition out the error of variance associated with repeated measures. Table T-8 puts the RCS's into relative perspective with their pretest and posttest mean values, showing the correlations pertinent to each set. In fact, never is the difference between an RCS and its posttest counterpart seen to be very large (suggesting no unusual test-retest effect), and the RCS-X-posttest coefficients are all strong.

For a preliminary view of the comparisons at issue, Table T-7 also shows the gain represented by each index RCS (for each treatment group), in its comparison with the control-group RCS. In this table, and again in its CRCS counterpart (Table T-11) the significance of t-values is indicated at any of four levels (from $p < .10$ to $p < .001$) for descriptive purposes: The intent is to illustrate the overall trend in the relative position (strength) of the three treatment types. Summarily, all treatments produced statistically significant gains in the behavior and information attributes (TOBEHA, TOINFO) and in the composite measure (RPICOMP); only the MG type did so in the attitudinal attribute (TOATTI) as well. Reading by index across t-ratios for the three treatment groups, one can assess the relative strength of the three modes in the data. Clearly, both the FI and MG types make very strong showings, with an important edge going to the MG group for its significant result in the attitudinal attribute. Again, these data involve the RCS, adjusted for error of variance associated with repeated measures but not yet corrected for the influence of differentially distributed demographic covariates. With respect to the treatment/control comparisons, it is chiefly important at this preliminary point to acknowledge the following: (1) the statistically significant RCS's on the composite outcome measure (RPICOMP) for

all treatment types; and (2) the statistically significant RCS's on the total-attribute outcome measures (TOBEHA, TOINFO, TOATTI) for seven of the nine treatment-attribute combinations (all cases for TOBEHA and TOINFO). The significant gain by the MG group on the TOATTI measure punctuates the overall picture of positive treatment effect.

Tables T-9 and T-10 show all of the index/demographic-variable combinations submitted for correction in the computations of the several corrected residual change scores (CRCS's). The procedure and the information depicted here have been described earlier. Table T-10 shows the rigor of the correction for the influence of differentially distributed demographic variables: Correlation coefficients for all of the combinations are seen to have been markedly lowered. Actual probabilities have been shown for each entry, in both tables, to emphasize the strength of the correction.

The behavior attribute was the most extensively affected by the demographic-covariate phenomenon, the information and attitude indexes to a lesser extent. Two of the attitude indexes, PRZ and FWC, produced no interactions requiring correction. The numerous corrections required by combinations involving HMB and FPB anticipate the severely diminished picture of behavioral gain in Table T-11. Why suspect interactions became so concentrated in combinations involving these two behavior measures is not clear; work continuing on the analysis of the items and factors, using data from this study and others, will perhaps shed light on the matter. Certainly, control-group differences fully discussed earlier become a major consideration here.

Final treatment/control comparisons using mean-score values are presented in Table T-11. Here the corrected residual change scores (CRCS's) are presented, along with t-ratios testing all treatment/control comparisons on all indexes. Table T-12 simply collects all of the RCS's and CRCS's for visual comparison, to point up the decline in significant differences between the control group and each treatment group (as a result of the correction for demographic covariates). One should not be unduly alarmed by the apparent loss: Our interest in the CRCS is in its character as a base-free, unbiased outcome measure--for use as a dependent-variable quantity in the multiple-regression analysis to follow. The mean-score comparisons have been shown each step of the way to convey a sense of the data, to suggest the relative

shares of treatment effect among the three treatment types, and to test the general strength of that effect. The ultimate interest lies, though, in the variance statistics produced by the multiple-regression analysis.

Still, certain inferences should be weighed. The Table T-11 comparisons show that all of the treatment types continue to have their informational strengths reflected by the financial factor (FPI). UI programs, by definition programs of a strongly informational character and commonly involving financial resource experts, make their strongest showing on the FPI index; too, the only other near-significant UI showing is on the other financial factor (FPB). The old argument that traditional lecture models and reading-materials approaches touch few chords in the individual other than those related to needs for information about money are perhaps reinforced by these data. But that conclusion is only reasonable here if it can be shown that the measurement tools being used tap other kinds of program effect (behavior, attitudes) in instances involving other treatment types. That condition is met most directly by the MG workshop--the only treatment type to achieve statistically significant CRCS's (treatment/control comparisons) on at least one measure in all of the attribute areas. The condition is additionally met by the fact that both the FI and MG groups developed significant CRCS's on different total-attribute measures (FI-TOINFO,MG-TOATTI). Taken together, these variations suggest that the measurement devices are tapping issues other than merely financial ones, when, presumably, the treatment experience itself has evoked some bearings with those "other" issues.

Results of the multiple-regression analysis for the central treatment-effects study are summarized in Tables T-13 through T-16. Data are presented for the separate attribute categories in Tables T-13 (behavior), T-14 (information), and T-15 (attitudes). Table T-16 summarizes statistics for the composite outcome measure (RPICOMP). The overriding interest here is upon the proporiton of outcome-measure variance specificable as treatment effect, and upon the proportions of such variance attributable to each of the different treatment types. The statistical construction was discussed and referenced earlier.

The results of the final multiple-regression procedures may be summarized as follows:

(1) Behavior (Table T-13): All treatment effect (R^2) accounted for less than 1% of the variance on each of the behavior outcome measures (HMB, FPB, CAB, TOBEHA). No specific treatment accounted for a statistically significant proportion of variance on any of these measures.

(2) Information (Table T-14): Combined treatment effect (R^2) proved statistically significant on two of the information outcome measures (FPI, TOINFO). In the case of FPI, statistically significant proportions of variance were accounted for by both UI ($p < .01$) and MG ($p < .05$). However, the FI group maintained its overall informational strength by accounting for a statistically significant ($p < .01$) proportion of the TOINFO variance. This curious arrangement of results requires attention to the negative-direction outcomes (treatment/control comparisons, Table T-11) for both UI and MG on the informational measures. In fact, UI developed negative results in both measures other than FPI (both the health-care and psychological-adjustment information measures). MG also developed a negative result in the health-care measure. In other words, the FI group was the only treatment group with positive gains over the control in all of the information measures. Clearly, the steadiness of the FI group here made the difference.

(3) Attitudes (Table T-15): Total treatment effect (R^2) proved statistically significant only in the case of PRZ (pre-retirement zest). No specific treatment accounted for a statistically significant proportion of variance on any of these measures. The MG workshops achieved the strongest relative effect on all measures.

(4) Composite Outcome Measure (Table T-16): All three treatments accounted for statistically significant proportions of outcome-measure variance on the composite index (RPICOMP)--the pattern of relative strength following the pattern seen earlier in the treatment/control comparisons of change scores. F-ratios testing the sr^2 (as a relative proportion of variance in each case) were found significant for UI ($p < .05$), FI ($p < .01$), and MG ($p < .01$). Along with the variance statistics, Table T-16 reassembles the CRCS mean-score values and the treatment/control comparison t-ratios.

(5) All statistically significant changes stated as proportions of outcome-measure variance demonstrated positive direction. Ignoring the question of significance, one sees that changes showed positive direction on 12 of the 13 measures for both FI and MG, and on 10 of the 13 for UI. The negative changes were too few to support inference.

Table T-17 represents analysis performed on selected data for the purpose of examining more closely the relative strengths of the FI and MG methods. The study producing these data also represents a more highly controlled application of the instrumentation and methodology employed. Within the general treatment-effects study, a particular collection of the contributing programs involved pairs of FI and MG types delivered by the same 10 leaders. The leaders had been trained together for the cycle-3 period. Eight of them returned to their respective community-college settings and delivered one program using the FI method and one using the MG model. The ninth and tenth leaders split a pair including one of each type. The 18 programs all used a format of four weekly meetings. Sixteen of them constituted leader-matched pairs. All of the leaders experienced the same training. All of the programs were administratively mounted in the community-college context (though many of them involved co-sponsorship with local employers). All of the programs were at some point monitored by project staff and found to be generally faithful applications of the respective treatment modes. And 3-month post-questionnaires were returned by the subjects in these programs at rates higher than those for any other observed subgroup of subjects (Table T-1 and surrounding discussion).

Several circumstances converged to stimulate this special analysis: (1) Tiberi, Boyack and Kerschner (1978) had found the FI approach to demonstrate superior treatment effect; (2) independently applying the RPI in an innovative program-evaluation procedure, Owen (1979) concluded that the MG method was equally as attractive; (3) the present general study found the FI and MG methods dominating the statistics and verifying the generally positive conclusions of both of those studies; and (4) the present situation afforded the first opportunity to compare the two methods head-on, under the very desirable delivery conditions noted above. Data from subjects in the 18 programs were submitted to the full analysis as set out above for the general study (the same control group was used).

Table T-17 presents the critical variance statistics developed in that comparison, for the outcome measures of major interest--the three total-attribute indexes (behavior, information, attitudes) and the composite index (RPICOMP). (The reader is alerted to the fact that the size of the

statistical quantities differs noticeably from that of the quantities in the general study just reviewed. Though a portion of that difference may be attributed to the more rigorous conditions of this study--including the fact that only the two strong treatment groups are present, another portion results from an adjustment in the numerical handling of certain data. Since the change is internal and equivalently applied, comparative statistics may be viewed in the same manner as would those statistics in the general study. The differences between figures for the general study and those in this analysis should not be taken, however, as true differences in the robustness of the treatment effect.)

The results of this special comparison are important, indeed. While they verify the strength of the FI method reported by Tiberi, Boyack and Kerschner (1978), they establish the authority of the MG model as well. It is seen that both methods (treatment/control comparisons) account for statistically significant proportions of variance on all summary measures except in the attitude attribute. Total treatment effect is significant on TOBEHA, TOINFO, and RPICOMP. Though a non-significant result, the MG group continues to account for a relatively larger proportion of the outcome-measure variance in the attitude attribute. And, in the behavioral attribute where both methods develop significant treatment effect, MG clearly outdistances FI in the relative proporitons of variance involved. Both models show significant treatment effect on the composite outcome measure--$p < .01$ for FI, and $p < .001$ for MG. Behavioral and informational gains account for a majority of this effect, though the overall result for MG continues to be supported by noticeable (though non-significant) effect in the attitudinal measure.

Summative Evaluation Data

At the conclusion of each program's last session, participant evaluation reports were collected (see Appendix C-3 for questionnaire form). The data served three general objectives:

> (1) to provide immediate feedback to any organization or employer involved as sponsor, as well as to the program leader;

(2) to provide subject reports of perceived gain of or change, which could be compared with measured change as a further validity support;

(3) to provide an additional body of information that could be examined for consistently appearing differences among the treatment modes.

Our interest here rests with the latter two uses. Certain categories of information were observed: (1) feelings about the program experience itself--stated as a level of satisfaction, and as expressions of what was liked and disliked; (2) interpretations of the personal impact of the program (self-assessment of change); (3) perceptions of content coverage, expressed as 5-point Likert-scale ratings of 32 topics; and (4) miscellaneous considerations of the program facility, presentation, and so on.

As set out earlier (Table T-1), 441 of the RPI subjects completed programs and submitted summative evaluation questionnaires. The responses suffered from the usual weaknesses of such data. Scaled items rating program leaders, teaching techniques, and physical facilities developed little differentiation--either within groups of respondents or across treatment models. Ratings were universally inflated (positive), and comparisons among treatments were not useful. Regardless of treatment type, participants normally felt good about having attended the programs, and they expressed appreciation of the experience.

An interesting illustration of this effect is seen in the volume of response to certain questions: Participants were asked to write in what they liked most about their programs and what they liked least about them. On these open-ended questions, 400 responses were recorded for the "liked most" item, and only 149 for the "liked least" item (some multiple answers in each category). Furthermore, not all of the 149 statements were in fact criticisms of qualities in the programs: The largest proportion of them (36%) simply complained that the program was too short (they wanted more!). Interestingly, the next largest proportion, (19%) were interprested as complaining about the demanding time involvement. Clearly, subjects were motivated to express positive feelings to a much greater degree than negative ones. And, when examined in their distribution across the three treatment groups, the small number of specific criticisms produced no statistically useful data.

As with all open-ended questions, responses to the "liked most" item were coded into pre-established categories. Analysis of all 400 responses combined is shown in Table T-22, as percents of responses falling into several categories. Again, analysis across treatment types did not support inference; however, the combined data make a very interesting statement about the program qualities that subjects found important. We should stress that the data were developed from subjectively expressed, write-in responses. It should also be remembered that three of the four specific program models (the reading-discussion group, the facilitated small group, and the multi-group workshop) all depend upon participant discussion/interaction. The FI and MG methods, indeed, insist that the participatory role of the learner is essential to effective pre-retirement education. Therefore, our interest in these data should not be a passing one: That the subjects themselves would strongly express such positive views of the very qualities argued by the treatment concepts (group discussion, sharing with peers, open-exchange atmosphere, participant involvement) is a major finding that deserves further attention.

Table T-22. Participant Expressions of What Was Liked Most about the Program Experience - all subjects, percent responding in several categories.[1]

What did you like most about the program you attended:	% Indicating
Group discussions/sharing with peers	32.5
Enhanced awareness	19.4
Staff attitude/enthusiasm	16.9
Open-exchange atmosphere/participant involvement	16.9
Program content	12.0
Guest speakers/experts	7.9
Reading materials	3.6

[1]Program Completion N=441. The recorded 400 responses to the question included some multiple responses. % refers to proportion of all subjects expressing a response subsequently classified in the respective category (amounts do not add to 100%).

Participants were also asked for a specific rating of satisfaction with their programs, via a 5-point scale. All 441 subjects who submitted

evaluation questionnaires answered this item. The results, by treatment type, are shown in Table T-23. The volume of dissatisfaction was very slight and quite similar across the three groups. The definite expression of satisfaction represents about 90% of the subjects in each treatment type, with about 6.5% of all subjects selecting the "undecided" option. What stands out, however, is the modal tendency of UI subjects to be merely "satisfied"--distinguishing the group from FI and MG, where the modal expression shifts to the "very satisfied" option. Many more FI and MG subjects, proportionately, were willing to express strong satisfaction. One cannot resist the conclusion of a tentativeness on the part of UI participants with respect to their perceived satisfaction with their program experiences.

Table T-23. Participant Reports of Satisfaction with Program, by Treatment Type - percents of subjects in five levels of satisfaction.[1]

How satisfied were you with the program you attended?	Treatment		
	UI (N=102)	FI (N=105)	MG (N=234)
Very satisfied	30.7	48.6	51.3
Satisfied	60.4	41.4	37.0
Neither satisfied/dissatisfied	5.9	5.4	7.1
Dissatisfied	1.0	1.8	....
Very dissatisfied	2.0	2.7	4.5
	100 %	99.9%	99.9%

[1]Program Completion N=441; 100% of subjects responded.

Evaluation of program content coverage was sought via a list of 32 topics; subjects rated coverage for each topic using a 5-point Likert scale, which included a zero-point "did not cover" option. The 32 topics and complete scale information are shown in Table T-24 and its footnote. Chi-square analysis applied to the scale-score distributions, across the three treatments, produced only scattered significance and no clear pattern for inference. Correlational studies of these scale scores with treatment outcome measures (CRCS's discussed above) also produced no treatment-referenced pattern of relationships between the two kinds of assessments.

Table T-24. Participant Perceptions of Adequacy of Program Coverage of Several Content Areas, by Treatment - percent of subjects in each treatment group who perceived the coverage as adequate or better.[1]

Content Area	% indicating topic covered adequately or better		
	UI SUBJECTS	FI SUBJECTS	MG SUBJECTS
Middle-age issues	67.7	80.2	68.0
Leisure-time activities	84.8	89.8	87.3
Estate planning	55.7	57.9	50.4
Employment opportunities	58.8	78.7	51.7
Resources and services	71.9	89.4	81.1
Volunteer opportunities	84.4	89.6	72.8
Mental health	82.7	87.9	76.2
Family budgeting	55.1	74.5	72.8
Retirement housing	76.5	81.9	69.8
Social Security	76.3	84.3	76.5
Role of older person in society	89.8	93.2	84.0
Financial planning	65.6	80.4	85.2
Aging process	84.4	87.7	85.8
Medicare/Medicaid	56.8	69.1	70.7
Being intelligent consumer	42.9	64.6	59.6
Maintaining physical health	82.3	93.6	88.1
Choosing a place to live	82.3	87.7	82.5
Tax information	52.6	49.1	56.2
Emotional problems of older persons	73.0	84.9	75.0
How to make plans	77.7	86.8	84.0
Marital relationships	70.5	84.9	75.2
Adult education programs	80.2	80.8	69.6
Widowhood	47.3	60.8	46.5
Pensions/annuities/benefits	55.2	74.7	70.9
Sexuality in later years	64.8	79.8	75.2
Nutrition	78.9	77.2	69.3
The single older person	47.8	68.0	42.5
Death and dying	38.7	52.4	44.9
Family & social relationships	83.0	87.6	81.0
Stress and tension	66.7	72.0	70.9
Exercise	80.6	87.6	86.1
Living arrangements	83.2	90.6	84.1

[1]Program Completion N=441. Among all subjects combined, the response rate per item varies from 98% to 90%. Across the items, the three treatment groups exhibit nearly equivalent response-rate patterns. Response options: 0=did not cover; 1=very inadequately; 2=inadequately; 3=adequately; 4=very adequately (scale scores of 3 and 4 represented in percents shown).

Nevertheless, the 32 distributions do invite several observations. Table T-24 has collected that portion of each item's distribution which judged the matter positively (scale scores denoting "adequate" or "very adequate" coverage), and has expressed that combined judgment as a percentage of the subjects in each case. Certainly, the resulting picture stimulates discussion of several points.

(1) Subjects perceived numerous life-style and personal-development issues as well covered in these programs, regardless of treatment type. Topics having to do with leisure-time activities, resources and services, relationships, planning, aging, living arrangements, and health issues were all rated as adequately or very adequately covered, by large majorities of subjects in all treatment types.

(2) For specific financial information matters (budgeting, taxes, pensions, estate planning), ratings of adequacy declined and showed less uniformity across treatments. Family budgeting, for example, was seen as adequately attended by nearly 75% of subjects in the FI and MG methods, where specific exercises are introduced around the budgeting task; coverage was seen as adequate by significantly fewer subjects in the UI group, where such exercises are less likely to be used (though budget forms may be distributed in conjunction with a presentation, or as part of reading material).

Tax information and estate planning--both topic areas which imply highly individualized circumstances and planning needs--were seen as much less adequately covered, by subjects in all treatments. We would have expected the judgments here to have been even more negative, since none of these short-term programs takes a detailed approach to such matters.

(3) In the general area of financial planning, FI and MG subjects were very high in their appraisal of coverage. UI subjects were much less likely to rate coverage of general financial planning as adequate. One may speculate that the broader idea of planning, used as an organizing principle in FI and MG processes more effectively integrates the financial planning issue within a broader perspective of the retirement transition.

(4) With respect to special issues attaching to the single person, and to widowhood, and on the matter of death and dying, there was a marked increase in subject selection of the zero-point option ("did not cover").

> Thus proportions shown in Table T-24 decline sharply from those for many other topics. For single and widowed persons, it appears that all treatment types invite re-evaluation of their attention to needs signalled or evoked by the idea of retirement, as well as by the program experience itself.
>
> With respect to death and dying, one questions the presence of the item on the content list. Leaders surely acknowledge realities of death concerns, and associated issues of bereavement, legal-affairs planning, accurate information about life-expectancies, the deaths of very aged parents, and so on. But the short-term pre-retirement education program is not an appropriate context for an extended attention to the subject. In that sense, participants would have judged accurately that the subject was not covered, but such a judgment would not necessarily suggest a program defieciency. It is impossible to speculate about what areas of the topic are implicit in a participant's determination that the matter had not been covered.

The format of presentation chosen for Table T-24 intended to sharpen the image of differentiation present in the content ratings. In other words, though these responses developed little statistical interest on the tests discussed above, the data viewed in this manner are suggestive. The list itself was adopted without modification from the questionnaire protocol in Tiberi, Boyack and Kerschner (1978). The data presented here indicate sufficient differentiation in ratings to encourage continued use of the list (with additions and deletions of specific items as analysis indicates). Of all the information sought in the participant evaluation questionnaire, this kind of data certainly appears to be among the most useful.

Finally, Table T-25 shows responses to self-ratings of treatment effect--in terms of perceived influence on (1) attitudes toward retirement, (2) plans for retirement, and (3) current activities (behavior). For each category, the table sets out each treatment's distribution of ratings, as proportions of total response at each point on the 7-point scale. The format reveals the character of each distribution of ratings, and it allows easy face comparison among the treatment groups. Routinely performed chi-square analysis yielded statistically significant differences among the treatments in two categories (plans and activities). These data deserve thoughtful attention along several lines.

Table T-25. Participant Reports of Program Influence, by Treatment - percents of subjects indicating degrees of influence on seven-point scale.[1]

I. To what extent did the program influence your attitude toward retirement?

Treatment Mode	A Great Deal						Not At All
UI subjects	19.4	32.7	27.5	14.3	2.0	4.1	1.0
FI subjects	35.5	29.1	17.3	13.6	1.8	1.8	.9
MG subjects	40.1	19.7	24.3	9.2	3.9	1.3	1.3

II. To what extent did the program influence your plans for retirement?*

Treatment Mode	A Great Deal						Not At All
UI subjects	14.7	34.7	21.0	15.8	5.3	6.3	2.1
FI subjects	29.6	29.6	15.7	21.3	....	.9	2.8
MG subjects	36.7	19.3	21.3	11.3	4.0	2.0	5.3

*Chi square significant: $p < .01$.

III. To what extent did the program influence your current activities?*

Treatment Mode	A Great Deal						Not At All
UI subjects	8.5	24.5	21.3	13.8	14.9	9.6	7.4
FI subjects	20.4	23.1	23.1	19.4	2.8	4.6	6.5
MG subjects	18.8	16.7	24.3	19.4	5.6	6.3	9.0

*Chi square significant: $p < .05$.

[1]Program Completion N=441; 94% of subjects responded to item.

First, with respect to the overall character of the distributions, trends are nearly all positive. That is certainly the case with attitudes and plans; the picture for activities is mixed. Of special interest is the fact that the most strongly positive distributions, for all treatment types, are found in the ratings of attitudinal changes.

Second, comparatively, we see again the greater willingness of FI and MG subjects to select the most positive rating option--a phenomenon present in all three categories (and noted above on the ratings of satisfaction, Table T-23). In the most clear-cut distributions (attitudes and plans), MG subjects were the least likely to select the mid-point option suggesting uncertainty. In the case of the behavior assessment, it is difficult to imagine what the phrase "current activities" might have conveyed to the subject: Had one begun exercising? Consulted an estate counselor? Finally gone in to see the employee-benefits representative? Started cleaning out the attic? Read the Social Security material? Or what? And would we have expected all of these things, and others, to have happened in the four or six weeks of the program term? Does the weaker response profile of this question mean that participants haven't had time to act, haven't identified actions to take, or haven't been stimulated to act. The point is that the mode of measurement represented in Table T-25 does develop a greater degree of differentiation in the responses than is often the case in assorted scaled approaches, but that the response categories are very broad and, in this latter case, simply vague. Examination of statistical relationships between these data and the treatment outcome measures (CRCS's) produced no usable findings about treatment differences.

Nevertheless, it remains important to consider these self-reports of effect alongside the attempted measurement of change at the heart of the treatment-effects study. The problem of inference posed by the two assessments is a familiar one in this kind of research: Participants report that their program experiences (treatments) have influenced (changed) them, but the importance of that influence proves difficult to establish experimentally, statistically. Though self-reports of this kind may be vulnerable to halo effect, achievement norms, identification with leaders, and so on, they cannot be ignored entirely. In this regard, the problem of attitudinal change consistently

challenges. People who have experienced pre-retirement education programs--and particularly certain kinds of programs--feel better about something. Their own assessments consistently lay claim to reduced ambiguity, more congruence, less uncertainty, more confidence, and so on. Educational conceptions applied in methods like the FI and MG types set out specific objectives which seek exactly those kinds of effects--more positive feelings, informed perspective, reduced anxiety, planning behavior.

In view of the host of difficutlties attached to measuring such effects objectively, participant reports in these areas remain an important kind of information for the investigator. Indeed, in an assortment of scaled approaches used in different summative evaluation questionnaires over the study period, it is here in these self-reports of effects that responses show their sharpest differentiation--both in rating distributions within given groups, and in rating patterns between groups. Participants were relatively more precise in their responses to these items than in various ratings of leaders, teaching techniques, physical settings, materials, and so on.

Summary of Findings

1. Formal, short-term pre-retirement education programs can influence attitudes, increase knowledge, and stimulate behavior relevant to preparation for the retirement transition. It has been shown that all of the program methods tested produce statistically significant treatment effect, quantified as proportions of outcome-measure variance, as assessed by the Retirement Preparation Composite Index (Table T-16).

2. The present study has produced findings which do differentiate educational methodologies applied in pre-retirement education in terms of their effectiveness. Certain treatment methods are probably superior to others in their abilities to achieve desired outcomes for pre-retirement education.

(a) In direct treatment/control comparisons of highly refined outcome measures, the multi-group workshop method (MG) developed the strongest combined pattern of general gains and statistically significant effects across all three attributes of interest--behavior, information, attitudes (Tables T-11 and T-12). MG tested weakest in the information measures, though it achieved a significant ($p < .05$) effect in the financial-planning information index.

In the attitude measures, MG produced the only consistent pattern of gains, as well as the only statistically significant effects (Tables T-7 and T-11). The method is certainly distinguished here by its significant effect ($p < .05$) in the total-attitude attribute measure.

Outcome measures for MG showed positive gains on eight of the nine basic indexes, as well as on all three of the total-attribute indexes and on the RPI composite index. In terms of these treatment/control comparisons, the MG method developed the strongest effect ($p < .001$) of all treatment types on the RPI composite outcome measure (Table T-11).

In the analysis of outcome-measure variance, MG produced the strongest relative effect among the treatments in the proportion of variance accounted for on the RPI composite measure ($p < .01$; Table T-16).

In a special, highly ordered study involving only FI and MG subjects, MG again produced the strongest relative effect in the proportion of outcome-measure variance accounted for on the RPI composite measure ($p < .001$; Table T-17).

With respect to the measurement of treatment effects, these findings for the MG treatment method constitute the major statistical findings of this study. As an extension of the kind of inquiry seen in Tiberi, Boyack and Kerschner (1978) and in Owen (1979), they constitute findings of importance in the areas of pre-retirement education methodology, measurement of pre-retirement program effectiveness, and, potentially, measurement of retirement preparedness.

(b) In the direct treatment/control comparisons of outcome measures, the unstructured information (UI) methods developed the relatively weakest and most mixed picture of effects among the three treatment categories tested.

UI produced negative effects on three of the nine basic indexes (Table T-11): Two of these in the emotionally toned psychological-adjustment index and the pre-retirement zest (attitude) index repeat a pattern found by Tiberi, Boyack and Kerschner (1978) for similar kinds of program models.

In terms of these change-score comparisons, the UI became the only treatment type failing to achieve statistically significant effect on the RPI composite outcome measure (Table T-11).

Crossing attribute categories, UI gathered its greatest strength in the financial topic-area--its strongest showings coming on the financial-planning behavior index and the financial-planning information index. Its strength here surely explains its statistically significant standing in the analysis of outcome-measure variance for the RPI composite index (Table T-16).

(c) Similar to the MG method in underlying philosophy and teaching/learning theory, the facilitated interaction (FI) method for small groups achieved a strong summary result in the direct treatment/control comparisons of outcome measures. FI showed gains in eight of the nine basic indexes, all three of the total-attribute indexes, and the RPI composite index. The strong summary result is seen in the statistically significant effect ($p < .01$) on the RPI composite outcome measure (Table T-11). This effect was supported primarily by a similarly significant treatment/control showing ($p < .01$) in the total-information attribute measure (Table T-11).

In other specifics, FI performance was undistinguished; in the attitude category, the picture was mixed, with the method's only negative effect seen in this group (Table T-11).

In the analysis of outcome-measure variance, FI produced a statistically significant ($p < .01$) effect in the proportion of variance accounted for on the RPI composite measure (Table T-16); the method compares very favorably with MG in terms of this summary effect, which was carried largely by the overall pattern of gains in the behavioral and informational categories.

Miscellaneous Findings and Conclusions

1. Some characteristics of the study sample bear repeating as descriptive findings about pre-retirees who are attending programs. Data reference the 754 subjects encountered over the entire three-year period of programming (Appendix A-2).

(a) A significant majority of subjects are 55-64 years of age, and fully half of program attendees are within two years of retirement. (88% of program entrants were 50-64 years old; 70% 55-64; 36% 60-64. Thirty-five percent were within one year of retiring; 50% within two years; 75% within five years.)

(b) People entering programs probably anticipate retirement earlier than age 65--and most of them with some work-related retirement income benefits apart from Social Security. (A surprising 75% of subjects anticipated retirement earlier than age 65--a large majority of them with retirement income benefits of some kind.)

Conclusion: Programs are attracting more and more individuals in their 50's; however, at the time of program entry, many of them may be no farther away from retirement than many attendees in their 60's. Thus, while relatively younger participants are attending more and more, programs are still dealing largely with individuals who are relatively close to the retirement event.

2. Regardless of the program delivery agency involved, programs seem more likely to be sufficiently enrolled if some kind of cooperating sponsorship involving employers can be realized. Programs offered on an open-enrollment basis, such as in a community-college setting, frequently fail for lack of enrollment. (See Appendices A-1 and A-2.)

3. The kind of program method used appears highly related to the ability of the program to maintain high participant attendance throughout the program term. Structured group-education methods observed in the present study (the FI and MG types) appeared to engage participants more effectively than did the conventional, pedagogical methods--as evidenced by sharp differences in retention/attrition rates (Table T-1 and surrounding discussion).

4. Extensive observation of short-term pre-retirement education programs suggests that their principal value lies in reducing confusion, enhancing awareness and personal integration, providing healthy perspective, and stimulating planning. Informational needs of the pre-retiree can be met only quite generally in the short-term program process. The present study and others (such as Tiberi, Boyack and Kerschner, 1978) offer evidence that certain program methods are probably more likely than others to achieve teaching/learning objectives in the desirable areas mentioned. Indeed, the evidence suggests that simple exposure to compartmentalized, pedagogical, "informational" events may serve to frustrate. Some observers have long felt that programs which do not provide a framework and an organizing principle for the developmental and emotional content evoked by the retirement issue are not only ineffective, but are inappropriate.

In the present study, when asked what they liked most about their programs, participants overwhelmingly volunteered that they most appreciated exactly the qualities that advocates believe do appropriately serve that emotional and developmental content, within the context of the short-term educational event: peer identification and mutuality, group interaction, informality, involvement, leader attitudes, and so on (Table T-22 and surrounding discussion).

5. Financial planning stands out boldly as an area of component informational needs for any individual. While certain consistencies have been seen in program treatment of many topics, a wide variety of techniques appear in the financial area: expert presenters of numerous persuasions (bankers, accountants, insurance representatives, lawyers, etc.), reading materials, budget forms and exercises, presentations about Social Security, presentations by in-house benefits representatives (sometimes including personalized benefits account information for participants), and so on.

In the present study, methods of all types tested demonstrated measurable treatment effects in the forms of increased knowledge and planning behaviors relevant to financial preparedness for retirement (Table T-11: note FPB and FPI indexes). These effects were measured three months following the program experiences, and, specifically, they represent behaviors that are presumed to have followed the program for the most part and information that may have accrued both during and after the program. The behaviors in question would be actions related to personal financial planning, such as visiting an attorney, making a will, having the house appraised, getting important documents together, (the "legal affairs" item dominates the FPB factor), making a budget, and so on. In the universally strong showing of the financial measures across all treatments, one is drawn to the implication that the measurement tool is particularly sensitive in this topic-area; that sensitivity, of course, might well be related to the fact that the financial area offers a host of informational needs, on the one hand, and suggested actions, on the other, that are specific, hence quite measureable.

The important side of this condition is that it demonstrates the viability of the basic measurement concept--in the assessment not only of program effectiveness, but also of retirement preparedness. The essential measurement concept and framework do in fact warrant further attention, for potential application along several lines; indeed item-development work and study of factors continues along a network of interested investigators (see Addendum).

6. Many individuals with some background of preparation and experience in assorted educational, community-service, or personnel contexts can become able--via short-term, direct-demonstration training approaches, to develop and deliver relatively sophisticated, structured, group-education types of pre-retirement programming. In the present study, potential program leaders trained at the University of Oregon Center for Gerontology, after delivering assorted types of programs in their own settings, have been almost unanimous in their expressed preferences for the small-group interaction and multi-group workshop models.

It is observed in the field that many individuals assigned the responsibility for pre-retirement programming but unaware of relevant educational issues involved rely on traditional approaches--especially the serial lecture format and other loosely applied stimulus/discussion methods. The rapidly growing phenomenon demands broadly expanded short-term training opportunities, addressed specifically to contexts where most of this education is being carried out--the personnel administration context, and the community adult-education context (represented chiefly by institutions of the community-college type). (See Appendix A-1.)

Addendum: The "Retirement Preparation Indexes"

The measurement tool used in this study of relative programs effectiveness has been called herein the "Retirement Preparation Indexes" (RPI). The indexes are in fact a system of measurement using (in this version) 37 items relevant to retirement preparedness, and originally intended for pretest-posttest protocols concerned with pre-retirement program effects. As fully set out earlier in this document, the RPI develops measures upon nine factors identified in Tiberi, Boyack and Kerschner (1978). The nine factors are referenced, in groups of three each, to three criteria attributes (behavior, information, attitudes) which are consistently reflected in statements of pre-retirement program objectives.

The collection of data developed in this study has presented the opportunity to continue exploration of items and indexes at work in the RPI. Naturally, investigators using the RPI are interested in verification of original findings regarding the nine factors, the items, and the factor-score coefficients. For purposes of such analysis, a pool of data has been created by cooperating investigators from this and other studies (Owen, 1979; Price, 1978). This data-pool represents 821 "pre-retirees"--each of whom completed the RPI pretest form at some time in 1977 or 1978. Work repeating the procedures of the original analysis (Tiberi, Boyack and Kerschner, 1978), as well as extensive, additional factorial examinations, continues in progress at the time of this report. (The cooperative work among investigators and the framework of the study have been coordinated by the present project director, James Lynch; statistical procedures and analytic operations have been designed by Thomas Straugh. It is expected that materials from their work will be submitted for publication.)

Preliminary analysis has suggested that the measurement concept can continue to be served by the gross distinctions among the three global attributes--although the attitudinal factors, not unexpectedly, challenge verification. Preliminary factor analyses--first of the respective groups of items serving each attribute, and then of all items (the latter in several operations looking at different numbers-of-factors solutions), has produced the following conclusions:

(1) Six of the nine factors can be replicated as originally advanced, via at least one of the two general approaches mentioned. They are:

Health Care Information
Financial Planning Information
Psychological Adjustment Information
Pre-retirement Zest (Attitude)
Financial Planning Behavior
Community Activity Behavior

(2) Four of these factors are reproduced by both of the two factorial approaches taken. They are:

Health Care Information
Financial Planning Information
Financial Planning Behavior
Community Activity Behavior

It is seen that the six verifiable factors include all of the original information group, two of the behavior group, and a single attitudinal factor. Of course, this early analysis has raised questions, too--especially regarding factor-score coefficients for index construction, utility of existing items, and the need to test new items.

Though this information should not be construed as a statement of findings at this point, important elements of the original RPI conception have been tentatively verified by methodological study which continues with these data. The RPI provides the foundations for instrumental techniques in the area of program evaluation (via the rigorous assessment of change as applied in the present study), as well as in the area of individual retirement preparedness.

References B-1

Ash, P. Pre-retirement counseling. Gerontologist, 6:97-127, 1966.

Campbell, D. T., and J. C. Stanley. Experimental and Quasi-Experimental Designs for Research. Chicago: Rand McNally, 1963.

Cohen, J. and P. Cohen. Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences. Hillsdale, New Jersey: Erlbaum, 1976.

Cronbach, L. J., and L. Furby. How we should measure change--or should we? Psychological Bulletin, 74:68-80, 1970.

Dubois, P. H. Multivariate Correlational Analysis. New York: Harper, 1957.

Ellsworth, R. B. "Consumer Feedback in Measuring the Effectiveness of Mental Health Programs." In Marcia Guttentag, Handbook of Evaluation Research, Beverley Hills, Sage Publications, 1975.

Greene, M., H. C. Pyron, U. V. Manion, and H. Winklevoss. Preretirement Counseling, Retirement Adjustment, and the Older Employee. Eugene, Oregon: University of Oregon, Graduate School of Management and Business, 1969.

Kerlinger, F. N., and E. J. Pedhauzer. Multiple Regression in Behavioral Research. New York: Holt, Rinehart and Winston, 1973.

Lord, F. M. "Elementary Models for Measuring Change." In C. W. Harris (ed.), Problems in Measuring Change. Madison: University of Wisconsin Press, 1962.

Lynch, J. H. Pre-retirement education: Issues in nomenclature and methodology. Paper delivered at the 23rd annual meeting of the Western Gerontological Society, Denver, March, 1977 (Educational Gerontology, in press).

Lynch, J. H., and B. G. Riddell. Pre-Retirement Education: A Multi-Group Discussion Approach. Vancouver, Canada: The University of British Columbia, Centre for Continuing Education, February, 1979.

Manion, U. V. Description of a group pre-retirement counseling model. Paper delivered at the American Psychological Association Convention, Honolulu, September, 1972.

Manion, U. V. Issues and trends in pre-retirement education. Industrial Gerontology, 1,4(Fall):28-36, 1974.

Manion, U. V. Preretirement counseling: The need for a new approach. Personnel and Guidance Journal, 55,3(November):119-121, 1976.

Manion, U. V., and J. H. Lynch. In-Career Planning for Retirement: An Integrated Reading-Discussion Workshop. Denton, Texas: Prepared for the Office of the Governor, in cooperation with the North Texas State University Center for Community Services, January, 1978.

Owen, C. S. An Evaluation of A Short-Term Preretirement Education Program Using Measurement of Change. Doctoral Dissertation, Eugene, Oregon: University of Oregon, College of Education, June, 1979.

Pyron, H. C., and U. V. Manion. The company, the individual, and the decision to retire. Industrial Gerontology, #4(Winter):1-26, 1970.

Tiberi, D. M., V. L. Boyack, and P. A. Kerschner. A comparative analysis of four preretirement education models. Educational Gerontology, 3,4(Oct.-Dec.):355-374.

APPENDIX C-1

Project:
A Research Study of Retirement Preparation Programs
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National Institute of Mental Health
Grantee Institution:
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College of Health, Physical Education, and Recreation
University of Oregon Center for Gerontology
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Project Director: James H. Lynch, PhD.

Pre-Retirement Education: Issues in Nomenclature and Methodology

by

James H. Lynch, PhD.

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PRE-RETIREMENT EDUCATION: ISSUES IN NOMENCLATURE AND METHODOLOGY

by
James H. Lynch, Ph.D.*

ABSTRACT

In both training and research contexts, we encounter a growing assortment of terms used in the discussion of delivery systems for pre-retirement education. This educational activity and its attendant language have proliferated to the extent that some sorting is needed for the student, trainer, personnel development officer, researcher, and teacher. An essential question asks how delivery concepts do really differ from each other--not simply with respect to technical options, but decidedly with attention to such substantial matters as understandings of the pre-retirement participant-learner, definitions of purpose, and specifications of differential leader training needs. In the spirit of that question, this writing (1) offers a framework of seven methodologically distinct delivery concepts visible in pre-retirement education today, (2) suggests their distinguishing qualities in terms of methodological principles and leader training issues, and (3) illustrates the more influential concepts with examples of established program models.

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The paper's title embraces the growing language of pre-retirement education (PRE) as an organizing stimulus; certainly, the ultimate interest lies in substantial methodological issues. Apart from the unaddressed questions about who is responsible for such education, and about what broader adult-education issues are suggested in this matter, the immediate fact is that pre-retirement education is generating rapidly expanding activities in three important contexts: (1) the university-gerontology research and training arena; (2) the diverse community-education context; and (3) the employer personnel setting. The writer is concerned principally with the variety of methodology advancing under this PRE banner, and with the need to bring some order to the attendant, proliferating nomenclature.

Herein, pre-retirement education refers to a wide variety of activities which share one characteristic most obviously: with respect to the pre-retiree, these activities constitute single, short-term educational events. Against an as yet unintegrated background of benefits counseling, scattered efforts at follow-on approaches (materials schedules, newsletters, etc.), the on-going resources of the personnel development unit (where one exists), referral, and the entirely obscure issue of follow-up services after retirement, pre-retirement education programs have moved to center stage. Few of these programs require more than 20 hours of instructional time, regardless of the method employed or the sponsoring context. The commanding language forms attending this phenomenon evolve from considerations of delivery formats--specifically, of differences in delivery methodology.

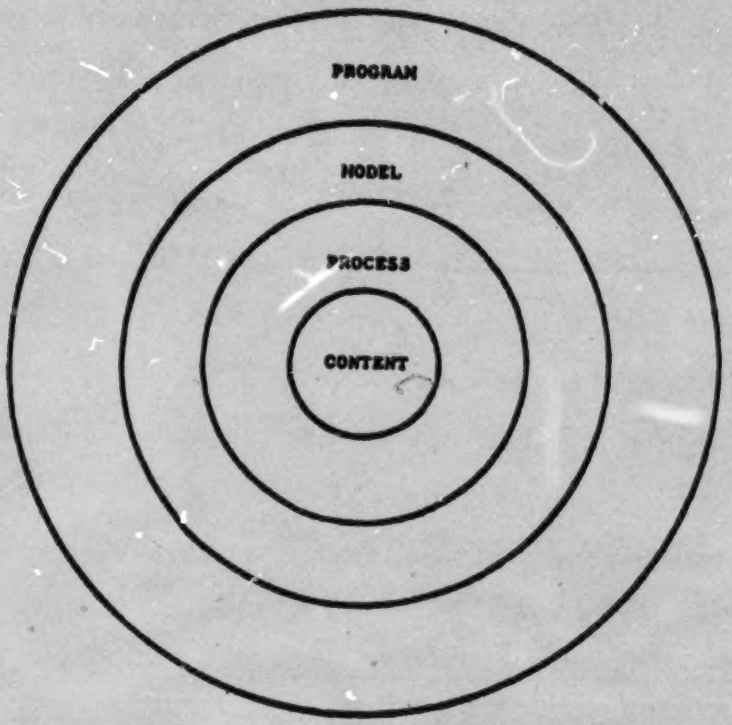
We now encounter a growing patchwork of terms used in differentiating PRE models (delivery system concepts). The situation has grown to the point where some sorting is needed for the student, trainer, personnel worker, researcher, and teacher.

At issue in the needed general discussion on the state of the art are serious questions about purpose, about views of the learner, about understandings of educational methods. With the proliferation of PRE programs and materials in the marketplace, methods must be deliberated in terms of the best understandings we can bring to that task. Finally, the themes of those deliberations must be made visible and meaningful to those many people who find themselves having to make decisions about pre-retirement education for their employees or clients. In the spirit of those sentiments, two schemata follow. The first analysis introduces and orders some basic terminology. The second broad framework identifies seven methodologically distinct PRE delivery-system concepts (distinguished here as process-modes), differentiates these in terms of established methodological principles, and suggests the kinds of PRE models that develop within each mode.

Aspects of PRE Delivery Systems

This first schema originally responded to confusion expressed by students of PRE training. Its purpose is to distinguish certain categories of methodological language and to describe important relationships among those categories. Figure 1, then, orders the relationships among four sets of concepts which regularly surface in

Figure 1. Aspects of PRE Delivery Methodology



discussion of PRE methods. Program, model, process, and content label the four sets--making the matter sound innocent enough. The relational logic of this nomenclature is subsumptive. That is, program refers to the conceptual world at issue; a PRE program includes everything from the publicity to the refreshments; at the level of delivery planning, it attends such matters as identification of target population, recruitment, delivery design, and evaluation. Finally, with respect to delivery, a program is an event. It is not simply a collection of lessons, materials, presentations, and so on; it is the event in which these features become an educational experience pertinent to people looking ahead to retirement.

A model is not an event; it is a delivery design. It is also, intended or not, a manifest view of the relationship between the learner and the learning experience. Model is the term we have come to apply to a recognizable methodological arrangement--a lecture model, for example, or a reading model. Every pre-retirement education program embraces a particular model as a delivery vehicle. A model has nothing to do with recruitment and evaluation and any number of non-delivery program matters; it has solely to do with a selected methodology for promulgating a specific content. In a general arrangement of the four concepts, then, we would say that a program engages its participants via a selected model, which reflects a unique arrangement of process features, whose use is intended to promulgate a content relevant to the task of preparing for retirement (Figure 1).

Process has to do precisely with the techniques, and patterns of techniques, for introducing, developing, and promulgating information (content). It is here that substantial philosophical-methodological arguments are really joined. For processes do not differentiate simply with respect to selected content emphases, or as a function of mechanical preferences and idiosyncrasies; they differ specifically and consequentially in the postures they establish for the learner within the educational experience itself. In this regard, what we see are certain dominant process orientations (presentation, for example), which develop certain consequent postures among participants (speaker/audience posture, in this case). The writer's term for these orientations and postures is process-mode; this concept collects the

characteristic process feature(s) and the related postural quality. A presentation/audience mode, then, is easily recognised as one of the most traditional of forms; here it is designated by its dominant informational technique (presentation) and the associated participant posture (audience). This concept of process-mode becomes foundational to the next section's consideration of specific model differences.

To illuminate the pivotal matter of process further, it will help to approach the schema's logic in the opposite direction--beginning with program content. In pre-retirement education, content outlines follow a well-established pattern. At the core of this content pattern are the following topics: (1) income and finances; (2) health management; (3) living arrangements and housing; (4) relationships with other people and social-matrix issues; (5) life-style matters involving time, leisure, and activities; and (6) enlightened perspectives on aging and development. The broad outlines of this content do not differ significantly from one program to another. Differences, for the observer, become differences in process.

For the methodologist, however, the differences represent choices about the relationship between the content and the learner. Consider an example: A typical content issue has to do with retirement's windfall of unobligated time. A program might undertake to identify for the pre-retiree numerous ways of occupying oneself in the community after retirement; or it might set about to explore attitudes toward leisure and concerns about life-style changes. In the former case, innumerable ideas about use of time can be introduced and commented

upon by guest experts on community recreation, senior center activities, adult education, and so on; lecture becomes the functional process feature; a presentation/audience mode relies heavily on lecture. In the second posture, where the participant attitudes and concerns are suggested as important to the content, the design will seek to introduce those matters into the situation; a technique for participant input and deliberation is required. In this case, discussion becomes a functional feature; discussion is important in a number of models mentioned below.

If the example seems an oversimplification at first glance, it nonetheless captures the essence of a central argument among interpreters of PRE programming--that argument having to do with the value of passive-learner process-modes in such a subjective matter as one's preparation and planning for life in retirement. Important research (Greene et al, 1969a) has carefully examined the relationships among attitudes, retirement adjustment, and life satisfaction, and this research has specifically influenced the development and investigation of andragogical delivery concepts in pre-retirement education (Manion, 1972, 1975, 1976; Murray, 1974; Lynch, 1978). Recently, Manion (1976) has further elaborated his philosophical-methodological arguments about education for "coping," about "prescription" and "pedagogy," and about the inappropriateness of traditional methods to the "problem of planning for retirement."

The intent here is simply to point out that models do become differentiated essentially in terms of dominant methodological

orientations toward the particular content/learner interface at issue--in this case, the retirement/pre-retiree interface. The PRE nomenclature emerges largely around this continuing circumstance and its attendant debate. Typically, the terms chosen to represent methods are words designating process features, and so it is with labels given PRE models: reading-discussion model, personal interaction model, lecture model, group discussion model, and so on.

The Nomenclature of PRE Model Concepts

A commonly used organizing principle for frameworks of the type being advanced here has been the "pedagogy/andragogy" construct deriving from Knowles (1970). We are indebted to Murray (1974) for his elaborate application of Knowles' ideas in the discussion of PRE methods, as well as to Manion (1975) for his articulation of the Murray framework in the education of PRE trainers and presenters. The writer applies a version of the Murray framework in Scott and Meyer (1976). An interesting schema by Rosencranz (1975) reflects the same principle at work.

It is not intended herein to apply the pedagogy/andragogy argument in detail, but simply to tease out a theme that does illuminate the matter of differences among the delivery concepts outlined below. Knowles (1973) reviews the argument, against a concise historical outline of teaching and learning theories. A general interpretation begins with the differences between children and adults as learners; more to the point however, the distinction stresses the incompatibilities between the historical origins and purposes of traditional teaching

postures and the social and developmental circumstance of the contemporary adult learner. Without question, the argument is ignited in any consideration of adult-education content that involves highly subjective dimensions. Sitting down to a formal consideration of one's "third age" certainly embraces such a content. As a measure of PRE methods, then, the pedagogy/andragogy construct can serve as a guide in examination of the relationships between purpose and method.

Essentially, the Murray framework locates various PRE methods along a continuum running from highly pedagogical styles and qualities to highly andragogical ones. Numerous descriptors can be applied to this continuum to clarify the differentiation being advanced. Ingall's (1973) "directing relationship/helping relationship," for example, refers to the poles of the instructional posture. Murrary's (1974) "focus on information/focus on self" refers to perceptions of the task/learner interface (relationship). Consider some additional descriptors: passive/active (learner); knowledge of expert/understandings of participant (value orientation); listening and receiving/interacting and helping (learner); telling/facilitating (teacher).

How, then, does the current picture of PRE programming appear when held up to the continuum? The period since Murray's paper has witnessed a major acceleration in PRE activity--on both program-delivery and research fronts. Interest in pre-retirement education has moved well beyond the university-gerontology context and become generally visible in the employer-personnel and community-education arenas. Examining the abundant activity, the writer finds seven

general process-modes in those PRE methods or models which seem to represent the enduring and possible approaches to the task. Table 1 below lists the seven modes, identifies examples of models that develop in each mode, and notes references to research where significant studies have been reported or undertaken.

The arrangement of the modes in Table 1 represents only a general pattern of sequencing against the pedagogy/andragogy continuum. Actually, methods tend to fall decidedly toward one characterisation or the other. For example, a "how-to-plan-for-retirement" book, a program of expert lectures, and a highly structured stimulus/discussion model are all fundamentally pedagogical at the task/learner interface. Finer distinctions are not pertinent here, where the purpose should be understood as descriptive and organisational rather than as judgmental.

Pre-retirement education occurs via these seven modes for developing and promulgating information. Almost entirely, what we call pre-retirement education programs can be methodologically located within any one of just five of the listed modes in Table 1. In most cases, activities in the individual/resource and self-exploration modes fall outside the concept of programming at work here. With the exception of certain applications of A-V media packages, activities in the individual/resource mode do not ordinarily constitute programs. Much informal activity does occur in this mode, of course; we may give an employee planning guides or occasional reading materials, or we may make available audio-visual packaged information for the employee's voluntary consumption. On the other hand, formalized materials-

Table 1. Table of Process-Modes and Models

PROCESS-MODE	MODEL OR METHOD	RESEARCH*
Individual/Resource Mode	1. Planning manuals 2. "How-to" books 3. Misc. reading 4. A-V media packages	Informal modes, difficult to investigate. USCAGC
Presentation/Audience Mode	Essentially, the traditional expert-lecture format, though various presentation media may be used.	USCAGC; UOCG
Unstructured Stimulus/Discussion	Reading-discussion models, for example, using topic-centered but informal discussion.	UOCG
Structured Stimulus/Discussion	Hunter's discussion model.	UMIG
	Packaged type: AIM's Retirement Planning Seminar, for example.	
Multi-Group Workshop Mode	Lynch's "integrated" discussion workshop for leaderless small groups in workshop format.	UOCG
Facilitated Interaction Group	UOCG's task-oriented interaction model.	UOCG
	Manion's small-group interaction model.	USCAGC
Self-Exploration Mode	Personal counseling, life planning, and other growth and development approaches.	

*USCAGC: University of Southern California, Andrus Gerontology Center. See Tiberi et al (1978), final report of study of relative effectiveness of several models.

UOCG: University of Oregon Center for Gerontology. Comparative study of several models presently in progress.

UMIG: University of Michigan, Institute of Gerontology. See Hunter (1968a), report of longitudinal study of a single model.

distribution schedules for pre-retirees or regularly scheduled meetings for viewing A-V packaged information may constitute rudimentary programs. Where A-V packages become methodologically central, they do so within other modes--as input in stimulus/discussion models, or as formalized programs broadcast on public television or via employer closed-circuit video (presentation/audience mode).

The self-exploration mode, falling far to the andragogical end of the continuum, is included primarily to complete the logic of the framework, as well as to acknowledge its philosophical and methodological relevance to the life-span issues associated with retirement. Again, we would not normally characterize activities here as "pre-retirement programs."

The five remaining modes circumscribe the bulk of PRE activity today. One should not construe the possibility of an eclectic mixing across these modes. The distinctions do not represent sets of techniques from which one can select as desired; rather each mode describes a unique relationship between the learner and the educational experience. Below, the modes are discussed and distinguished in reference to four dominant orientations--the second of these sub-dividing to accommodate the two stimulus/discussion concepts.

Measuring the comparative effectiveness of short-term educational events remains charged with uncertainties; accordingly, little rigorous investigation of these delivery concepts has been seen. Hunter's (1968a) investigation stands as an early, careful study of a single model. The USCAGC study (Tiberi et al, 1978) took an important

step forward in comparative research--offering valuable groundwork in instrument development and research methodology, in addition to its provocative conclusions regarding program effectiveness. The continuing UOCC study has incorporated Tiberi's "retirement preparation indexes" into its measurement protocol. Specific models attended in these latter two studies are noted in discussion below.

1. Presentation/Audience Mode. In this category reside programs which rely almost fully on the traditional lecture, or expert-speaker, technique for informational input, employing it without further involvement of the audience (except for the familiar question/answer feature). The form simply applies the pedagogy we have known since our earliest educational experiences. The lecture series is common to high-interest and vogue offerings in community-education settings (community centers, family mental-health agencies, public libraries, community colleges, and so on). Applied in pre-retirement education, input techniques include guest speakers and filmed presentations, single and multiple presenters and moderated panels, and serial lectures by a convening instructor. The common characteristic of these techniques is the preponderance of one-way communication from the presenter(s) to the audience; a distinguishing corollary of that characteristic is the absence of communication among the audience members.

An important property of the mode is seen in the variety of people and organizations able to implement programs. One need not be a professional educator, counselor, or trainer to design and carry out a series of presentations by other experts. In many cases, the

convener's effort can be described as a completely logistical matter. To the community-center director with manifold responsibilities, to the benefits counselor who is abruptly assigned the PRE task, to the adult educator who is responding to some assessment of public interest--to a variety to potential conveners who have experienced little or no formal training in pre-retirement education, it is understandable that this traditional form would come first to mind.

2. Unstructured and Structured Stimulus/Discussion Modes. The orientation involves direct informational input to a participant group small enough in size to carry on a discussion. The group might be leaderless or it might be assisted by some employer representative or other convening person. Such a group might be found meeting in an employer personnel conference area, at a community college or community senior center, in a hotel as part of a travel-promotion concept, in a private home--the list goes on. Many people not trained as educators, trainers, or counselors can convene programs in these modes, assembling small groups of pre-retirees "to discuss" information generated via numerous stimuli--written materials, films, video-tapes, case studies, planning worksheets, and so on. In methodological terms, what may seem a diversity of program styles can be located here; they share a dominant informational technique (stimulus input) and an organizing participant posture (reactive discussion). Beyond these central and definitive commonalities, programs within this orientation are the least formally consistent from one to another. Specifically, they range from unstructured, periodic "parlor" discussion groups to such programs

as the highly structured Retirement Planning Seminar (1973, 1976) developed by Action for Independent Maturity, Inc. (AIM).

Within the purview of informal education, we recognize the unstructured mode suggested here as a traditional form--a small group of people assembled for objective discussion; it would seem that every subject under the sun has attracted discussion groups of this type. Here fits the small group of employees meeting in the personnel office to view a film on retirement and share some thoughts on the matter. Here also is the group that meets serially in reference to specific reading materials; the leaderless reading-discussion model being investigated in the UOCG study represents this type of unstructured stimulus/discussion.

Probably, the application of structured stimulus/discussion techniques in pre-retirement education was most significantly advanced by Hunter (1960, 1968a). Though his considerations of the nature and importance of discussion as a technique in PRE method philosophically foreshadowed certain qualities of the interaction methods noted below, Hunter's own model became a thorough articulation of the structured stimulus/discussion mode. Central to his method has been the use of anecdotal case studies, filmed vignettes, a variety of paper-and-pencil activities, a book for participants (Hunter, 1968b, 1976), and guest-expert lectures. The "retirement readiness checklists" and filmed vignettes developed by Hunter are well known to students of pre-retirement education.

Another development within this mode has been the "packaged program." Stimulus/discussion features lend themselves to packaged applications, and indeed that direction has become quite visible. Two formats can be seen here. AIM's Retirement Planning Seminar is perhaps the best-known example of the self-contained kit format; the attractively presented package provides materials for participants (readings, worksheets, etc.), other materials for the group's use (hypothetical case studies, filmstrips), and thorough instructions for the leader. The instructions tightly order the sequencing of activities and the distribution of time among the various procedures; discussion directions are prescribed by stimulus suggestions and questions included in the leader materials. To train potential leaders in the use of the package, the AIM organization offers a five-day training program (many of the persons conducting this training for AIM are themselves retirees).

A second kind of packaged approach is seen emerging in the employer setting; it consists generally of a discussion manual and an accompanying employee workbook, intended for use by a personnel development trainer or benefits counselor (who may have little formal preparation regarding PRE content and method). The approach has been seen, for example, in the case of large employers whose operations are widely distributed geographically; a single guide and materials concept is distributed from a central administrative office to personnel units throughout the organization.

With respect to programs that assemble participants, the writer estimates that the presentation/audience and stimulus/discussion modes

account for a clear majority of the activity in pre-retirement education today. Both the USCAGC and UOCG studies have included the former in their comparative research. In the UOCG study, an informal reading-discussion model was observed as an unstructured stimulus/discussion type, and the USCAGC study reported on a "semi-structured" stimulus/discussion method (Tiberi et al, 1978). Though packaged stimulus/discussion models present attractive options to a variety of conveners who have not been formally prepared, little research has examined the impact on pre-retirees of programs applying those techniques. Probably representing a smaller amount of programming activity, but having an impact on the analysis of all pre-retirement education, are designs being applied in the remaining modes discussed below.

3. Multi-Group Workshop Mode. Though the term has become diluted of some of its specificity today, a workshop here involves several small groups of participants, and it arranges process features for generating and promulgating information on both the intra-group and inter-group (workshop) levels. The full workshop replicates a community of shared interests and concerns, while the small leaderless discussion groups provide opportunities for establishing experientially the relevance and importance (in retirement planning) of such substantial matters as interpersonal communication, resource identification and use, mutual support systems, assistance in problem-solving, and so on. The distinguishing quality of the mode is the shared, task-oriented participation in the information generating activities.

Programs in this mode are strongly attuned to the pre-retirees as a resource and participant in his or her own educational experience. The small-group activities are designed to call upon the diversity of information, experience, and understanding which the members bring to the mutual issue of retirement. Participants' attitudes, feelings, and concerns become an acknowledged part of the information being developed. The individual shares in the group's task of developing and considering information. The importance of the small group's work, in turn, is reinforced by the regular reporting of its deliberations to the full workshop.

The writer's "integrated reading-discussion workshop" (Lynch, 1978) has been a recent systematic application of the workshop mode in pre-retirement education. The model is intended for use in time-concentrated formats, commonly arranged for a single two-day program of about 12 hours of instructional time. Demonstrated variations have included two full-day sessions scheduled one week apart, and a series of four three-hour meetings weekly. A single leader can comfortably and effectively deliver a program of this type to as many as 50 participants, though, for variety and balance, a male-female co-facilitating team is normally preferred. While an underlying pattern of process elements is held constant from topic to topic (linkage, information, task discussion, group reporting, linkage), the design mixes a variety of activities in service to those elements: prior reading, in-workshop reading, mini-lectures by staff, guest experts (regarding retirement benefits packages, for example, when with a single-employer group),

individual paper-and-pencil exercises, small-group topical discussion, special-interest sub-group discussions (men's and women's groups, for example), inter-group reporting, group reports to the workshop community, and staff linkage commentary (interpretation, feedback, transition).

Demonstration/training programs applying workshop methods have been prominent at North Texas State University (Manion and Lynch, 1978) and the University of Oregon (Lynch, 1978), and the model's effectiveness is being examined in the UOCG comparative study. Independent research is studying the ability of employer personnel units to achieve delivery capability via short-term demonstration/training.

4. Facilitated Interaction Group Mode. Models here derive generally from applications of small-group process theory, especially as interpreted in the supportive, task-oriented interaction group (the label "task-oriented T-group," which was applied to these models early on, is an inappropriate arrangement of terms and should be abandoned). The mode has been highly visible in PRE training and research, primarily for the following reasons: (1) Manion (1972) applied interaction group principles early on in the recent period of accelerating gerontological interest and PRE activity (he began exploring such models at the University of Oregon in 1969 and subsequently demonstrated them widely); and (2) the spirit of the mode is easily recognized by an entire generation of counselors, educational psychologists, human relations trainers, and personnel workers, whose period of matriculation witnessed truly influential movements in teaching/learning theory (Knowles, 1973, provides a concise review), as well as in the understanding of both the educative and psychotherapeutic functions of human

groups and organisations (Bradford, Gibb, and Benne, 1964; Bennis, 1968; Lifton, 1966; Shaffer and Galinsky, 1974; Harper, 1975).

A "group interaction" model, as Manion (1976) prefers to call the method, is distinguished by the presence of a trained facilitator in a small group of participants (probably 6 to 12 members). Programs in this mode may address one such group, or they may involve several small groups in a workshop-like format. While stimulus-input and presentation techniques are generally used, the emphasis is upon shared concerns and experience as a foundation for a mutually supportive, helping group process. The objective for the small group is to develop a mutually based interaction that will enhance self-awareness vis-a-vis retirement and later adult life. Serving that general intent, group activities direct attention toward pertinent attitudes, life-style issues, interpersonal matters such as communication, problem-solving skills and strategies, options and decision-making behavior, and perceptions of intrapersonal resources and goals.

Several program formats derive from the Manion applications. For several years the University of Oregon Center for Gerontology has demonstrated a model designed for classified employees of the University; participants meet for 1½ hours each afternoon for two weeks (10 sessions); the program is observed by students as an aspect of their PRE training. The participant group here is allowed to run up to 12 or 13 in number (including those spouses who attend), and leadership is handled by a male-female co-facilitating team. The co-trainers provide both the factual content (stimulus input) and the process leadership. This

model is presented to the students for analysis as a "task-oriented interaction group."

In the USCAGC study, Manion presented a time-concentrated 2½-day program for several individually facilitated small groups in a workshop-like format.* In this model, various informational techniques (mini-lectures, films) address relevant material to the full audience, but more of the total time is devoted to activities in the small groups. The version presented in the USC study was originally designed for married couples attending together (Manion, 1975), but it has been applied with mixed married/single groups as well. In the UOCC study, interaction models examined have been mostly of the single small-group type; time formats have varied from weekly meetings to full weekend programs, with the total instructional time again running to 12 or 13 hours.

Though these models represent highly developed methodological concepts, their staffing requirements (with respect both to leader/participant ratio and to leader expertise) limit the extent to which they are used. In spite of very favorable findings in the USC study, models of the facilitated interaction type will probably continue to experience only limited use. The demonstrated impact of these methods,

*Original reporting (Boyack and Tiberi, 1975) called the approach a "group counseling" model, following an earlier designation by Manion (1972). Citing the nomenclature offered here, the investigators subsequently identify the method as of the facilitated interaction type (Tiberi et al, 1978).

however, must figure prominently in our consideration of the full range of methodology outlined above.

Conclusion

Activity in short-term pre-retirement education programming is accelerating rapidly. This discussion has intended to collect and distinguish important methodological principles at work in this new education. The goal was to bring some order to these matters, in the form of a broad framework that would provide understandings for the PRE administrator, educator, researcher, and student. That framework intends to suggest the state of the art now. Certainly, purposes and forms in the future will be influenced by the expanding educational attention to adult life and development in general.

REFERENCES

Atchley, R. C. The Sociology of Retirement. New York: Schenkman, 1976.

Bennis, W. G. Organization Development: Its Nature, Origins, and Prospects. Reading, Mass.: Addison-Wesley, 1969.

Boyack, V. L., and D. M. Tiberi. A study of pre-retirement education. Paper delivered at the 28th Annual Meeting of the Gerontological Society, Louisville, Kentucky, October, 1975.

Bradford, L. P., J. R. Gibb, and K. D. Benne (eds.). T-Group Theory and Laboratory Method. New York: Wiley, 1964.

Brenner, H. T., and R. H. Linnell. Preretirement planning programs. Journal of the College and University Personnel Association, 27,3(July-August):77-89, 1976.

Carp, Frances M. (ed.). Retirement. New York: Behavior Publications, 1972.

Greene, M., H. C. Pyron, U. V. Manion, and H. Winklevoss. Preretirement Counseling, Retirement Adjustment and the Older Employee. Eugene, Oregon: University of Oregon, Graduate School of Management and Business, 1969a.

Greene, M., H. C. Pyron, U. V. Manion, and H. Winklevoss. Early Retirement: A Survey of Company Policies and Retirees' Experiences. Eugene, Oregon: University of Oregon, Graduate School of Management and Business, 1969b.

Harper, R. A. The New Psychotherapies. Englewood Cliffs, N. J.: Prentice-Hall, 1975.

Hunter, W. W. Preretirement education. Geriatrics, 15(November): 793-800, 1960.

Hunter, W. W. A Longitudinal Study of Preretirement Education. Ann Arbor, Michigan: The University of Michigan, Division of Gerontology, 1968a.

Hunter, W. W. Preparation for Retirement. Ann Arbor, Michigan: The University of Michigan, Division of Gerontology, 1968b.

Hunter, W. W. Preparation for Retirement (revised edition). Ann Arbor, Michigan: The University of Michigan, Institute of Gerontology, 1976.

Ingalls, J. D. A Trainer's Guide to Andragogy: Its Concepts, Experience and Application (revised edition). Washington, D. C.: U. S. Government Printing Office (SRS:DHEW Publication SRS 73-05301), 1973.

Kaaschau, P. L. Reevaluating the need for retirement preparation programs. Industrial Gerontology, 1,1(Winter):42-49, 1974.

Knowles, M. The Modern Practice of Adult Education: Andragogy versus Pedagogy. New York: Association Press, 1970.

Knowles, M. The Adult Learner: A Neglected Species. Houston: Gulf, 1973.

Lifton, W. M. Working with Groups: Group Process and Individual Growth (2nd edition). New York: Wiley, 1966.

Lynch, J. H. Two Models for Pre-retirement Education. Eugene, Oregon: University of Oregon Center for Gerontology, March, 1978.

Lynch, J. H. Developmental education for retirement. In R. L. Beiser (ed.), Work, Leisure and Retirement, monograph of the 1977 Congress of the World Federation for Mental Health, in press.

Manion, U. V. Description of a group pre-retirement counseling model. Paper delivered at the American Psychological Association Convention, Honolulu, September, 1972.

Manion, U. V. Issues and trends in pre-retirement education. Industrial Gerontology, 1,4(Fall):28-36, 1974.

Manion, U. V. Description of a Pre-Retirement Planning Seminar for Senior Employees and Spouses. Eugene, Oregon: Retirement Services, 1975.

Manion, U. V. Preretirement counseling: the need for a new approach. Personnel and Guidance Journal, 55,3(November):119-121, 1976

Manion, U. V., and J. H. Lynch. In-Career Planning for Retirement. Denton, Texas: Office of the Governor, State of Texas, and the North Texas State University Center for Community Services, January, 1978.

Morrison, M. H. The myth of employee planning for retirement. Industrial Gerontology, 2,2(Spring):135-143, 1975.

Murray, Donald G. Preretirement education: a new view of student and learner. Paper delivered at the 20th Annual Meeting of the Western Gerontological Society, Tucson, Arizona, March, 1974.

Retirement Planning Seminar. Washington, D. C.: Action for Independent Maturity (AIM), 1973, (revised edition) 1976.

Rosencrans, M. A. (ed.). Pre-Retirement Education: A Manual for Conference Leaders. Storrs, Conn.: University of Connecticut Program in Gerontology, 1975.

Scott, F. G., and S. L. Meyer (eds.). A Training Manual for Pre-Retirement Educators. Eugene, Oregon: University of Oregon Center for Gerontology, 1976.

Shaffer, J. B. P., and M. D. Galinsky. Models of Group Therapy & Sensitivity Training. Englewood Cliffs, N. J.: Prentice-Hall, 1974.

Sheldon, A., P. J. M. McEwan, and C. P. Ryser. Retirement: Patterns and Predictions. Washington, D. C.: U. S. Government Printing Office (NIMH:DHEW Publication ADM 74-49), 1975.

Streib, G. F., and C. J. Schneider. Retirement in American Society: Impact and Process. Ithaca, N. Y.: Cornell University Press, 1971.

Thorson, James A. A media approach to pre-retirement education. Adult Leadership, June, 1976, pp. 344-46.

Tiberi, D. M., V. L. Boyack, and P. A. Kerschner. A comparative analysis of four preretirement education models. Educational Gerontology, 3,4(Oct.-Nov.):355-374, 1978.

APPENDIX C-2

Project:
A Research Study of Retirement Preparation Programs
Grant No. 5 R01 MH 23949
National Institute of Mental Health
Grantee Institution:
University of Oregon
College of Health, Physical Education, and Recreation
University of Oregon Center for Gerontology
Principal Investigator: Frances G. Scott, PhD.
Project Director: James H. Lynch, PhD.

Retirement Preparation: A Study of Selected Demographic Variables and the Retirement Preparation Indexes

by

William F. Price, PhD.

This report is based upon Personal Value Orientations and Selected Demographic Variables as Predictors of Retirement Preparation among Preretirees. Doctoral Dissertation, School of Education, Oregon State University, July, 1978.

Retirement Preparation: A Study of Selected Demographic Variables and the Retirement Preparation Indexes

With both the trend toward early retirement and the fact that people are living to an older average age, more years of an individual's life will be spent in retirement. This realization has drawn attention to examining how a person approaches this time and the factors which play a part in the adjustment process.

In order to better understand the retirement process, this study set out to examine the relationship between different types of retirement preparation and selected demographic variables. It was of interest to see if the level of retirement preparation on a particular retirement index could be associated with specific groups within each independent variable.

Methodology

Subjects.

The sample of preretirees selected for this research was State of Oregon Classified Employees at Oregon State University who were within fifteen years of retirement under present regulations. Two hundred and six preretirees completed and returned the retirement questionnaire they received by mail. This group consisted of 78 males (38%) and 128 females (62%). This breakdown is representative of the population of preretirees at OSU who are classified employees. The larger number of females is accounted for by the larger percentage of persons falling into the category clerical workers or administrative assistants. A description of this sample is provided in Appendix A.

Instrumentation.

To measure the preretirees level of preparation for retirement, the Retirement Preparation Indexes (RPI) were used. The RPI consists of Likert-type and category selection questions organized around three main components: behavior, information, attitude. Tiberi and Boyack (1977) established three factors within each component using factor analysis. For each component, the factor analysis intercorrelated all of its items with one another. Those items clustering together, being highly correlated, were then assigned a differential weighting. The name assigned to each factor (e.g., health maintenance behavior) was based on the concept brought out by those items with the highest factor loading. The score for a factor is the summation of the item response times the factor loading of all the items in the factor.

The behavior factors are:

1. health maintenance - activities undertaken which enhance one's physical health,

2. financial planning - assistance seeking behavior from financial and/or legal experts, and

3. community activity - behavior indicative of active participation in community or other non-work related organizations.

The information factors are:

1. health care issues - perceived knowledge dealing with the details of medical insurance,

2. financial planning issues - perceived knowledge dealing with financial considerations, and

3. psychological adjustment - perceived knowledge dealing with emotional issues.

The attitude factors are:

1. retirement zest - an attitude connoting healthy enjoyment of anticipated retirement experiences,

2. retirement optimism - an attitude connoting rejection of old-age and retirement myths and stereotypes, and

3. functional worth and capability - an attitude connoting a determined, purposive retirement lifestyle.

The RPI yields thirteen different scores for each respondant: nine individual factor scores, three component scores (each being the summation of the factors in it's domain), and one composite score for the summation of the components, measuring the overall level of preparation for retirement.

Questions were included on the RPI to collect information on the following demographic features: sex (male, female), present age (50 to 54, 55 to 59, 60 or more), income (less than $10,000, between $10,000 and $20,000, more than $20,000), occupational status (managerial/professional, skilled workers, clerical, other blue-collar workers), marital status (married, not married), education (less than 12 years, high school graduate, some college, college graduate or better), health (fair, good, excellent), participation in continuing education (participant, non-participant), proximity to retirement (less than 5 years, 5 to 9 years, 10 years or more), retirement decision (mandatory, voluntary).

Statistical Procedure.

To analyze the retirement preparation scores for preretirees on each of the independent variables, the analysis of variance was the test statistic used. Preretirees were divided according to the categories within each variable. The index scores were then compared to see if any

significant differences existed between these groups ($\alpha = .05$). For variables with three or more categories, a test of Least Significant Differences was run if a significant difference was found among the groups on the index.

Results

Sex.

Two significant differences were found on the Retirement Preparation Indexes when examined according to sex. Financial Planning Information showed men scoring significantly higher than women, F (1,204) = 14.0339, $p < .001$. However, women had a higher level of preparation on the Retirement Zest Attitude Index, F (1,204) = 4.2826, $p < .05$. Appendix B presents the means and standard deviations for the analysis according to sex.

Present Age.

To examine the effect of age on retirement preparation, preretirees were divided into three age groups: 50 to 54, 55 to 59, 60 and older. The analysis of variance revealed significant differences among age groups on two indexes. A highly significant difference, F (2, 201) = 6.0904, $p < .01$, was found on Financial Planning Information. The oldest group had a significantly higher mean score than the other two younger groups. The second difference among age groups was on Total Information. Again the age group 60 and older had the highest mean preparation score, F (2, 201) = 3.3928, $p < .05$. The difference in retirement preparation was only significant between the youngest and the oldest groups of preretirees. Means and standard deviations are presented in Appendix C.

Income.

Only one significant difference was found among preretirees when analyzed according to their present income level (less than $10,000, between

$10,000 and $20,000, more than $20,000). On the index Financial Planning Information the middle and the high income groups both had significantly higher preparation scores than preretirees earning less than $10,000 per year, F (2, 195) = 6.7305, $p < .01$. The highest mean preparation score was for persons with incomes greater than $20,000 a year. Means and standard deviations are presented in Appendix D.

Occupational Status.

Four categories of employees were examined within this variable: managerial/professional, skilled workers, clerical, other blue-collar workers. Significant differences among these occupational groups were found on five indexes. The index Financial Planning Information showed highly significant differences among the groups, F (3, 181) = 6.5060, $p < .001$. The managerial/professional group had a significantly higher mean score than all of the other three occupational groups. Skilled workers scored significantly higher than other blue-collar workers. The second index with a significant difference among groups was Retirement Zest Attitude, F (3, 181) = 2.9499, $p < .05$. Clerical workers had the highest mean score on this index. Their score was significantly higher than skilled workers and other blue-collar workers. Total Behavior, F (3, 181) = 3.5230, $p < .05$, Total Information, F (3, 181) = 4.8826, $p < .01$, and the Complete RPI, F (3, 181) = 4.6207, $p < .01$, also revealed significant differences among groups. The managerial/professional category had the highest mean score on these indexes. Other blue-collar workers had a significantly lower mean score than all of the other three groups. A significant difference was also seen on Total Information between managerial/professional and clerical workers. Means and standard deviations are presented in Appendix E.

Marital Status.

This analysis examined preretirees who were married versus those who were not. Preretirees in the non-married group scored significantly higher than married persons on Community Activity Behavior, F (1, 203) = 3.8333, $p < .05$, Psychological Adjustment Information, F (1, 203) = 4.5598, $p < .05$, and Total Behavior, F (1, 203) = 4.0694, $p < .05$. Means and standard deviations are presented in Appendix F.

Education.

The analysis of preretirees according to their level of education (less than a high school education, high school graduate, some college education, college graduate) showed significant differences on seven indexes. For Community Activity Behavior, F (3,198) = 4.2780, $p < .01$, persons with less than a high school education scored significantly lower than those with some college and college graduates. On Financial Planning Information, F (3, 198) = 7.1957, $p < .001$, college graduates had a significantly higher mean score than all of the other groups. Preretirees with some college education had a significantly higher score than those with less than a high school education. The Retirement Zest Attitude Index, F (3,198) = 4.6131, $p < .01$, showed preretirees with less than a high school education scoring significantly lower than all of the other three groups. On Functional Worth and Capability preretirees with less than a high school education had a mean score significantly higher than high school graduates and college graduates, F (3,198) = 3.1409, $p < .05$. On the composite index Total Behavior differences were also found, F (3, 198) = 7.3497, $p < .001$. Preretirees with some college or college graduates scored significantly higher than those with a high school education or less. On Total Information, college graduates scored significantly higher than persons with a high school education or

less, F (3,198) = 3.4281, $p < .05$. Finally, the Complete RPI showed a highly significant difference among educational groups, F (3,198) = 5.5117, $p < .001$. Persons with some college education and college graduates scored significantly higher than the two groups with less education. Means and standard deviations are presented in Appendix G.

Health.

Due to very few preretirees reporting poor health (n = 4), the analysis of variance was run on three categories of health ratings: fair, good, excellent. Seven of the indexes showed significant differences in mean retirement preparation scores among the groups: Health Maintenance Behavior, F (2, 198) = 7.2038, $p < .001$; Financial Planning Information, F (2, 198) = 4.6491, $p < .01$; Retirement Zest Attitude, F (2, 198) = 6.6685, $p < .005$; Total Behavior, F (2, 198) = 8.0355, $p < .001$; Total Information, F (2, 198) = 4.0823, $p < .05$; Total Attitude, F (2, 198) = 4.0276, $p < .05$; Complete RPI, F (2, 198) = 11.0490, $p < .0001$. On all of the indexes where significant differences were seen in mean preparation scores, the group of persons with excellent health had the highest scores. On Health Maintenance Behavior, Total Behavior, and the Complete RPI, those with excellent health scored significantly higher than preretirees in good health who in turn scored significantly higher than those reporting fair health. On Financial Planning Information, Retirement Zest Attitude, and Total Information, preretirees in excellent health had significantly higher preparation scores than both of the other groups. No significant differences were seen between the groups reporting fair and good health for these latter three indexes. For Total Attitude, a significant difference existed between those in fair health and excellent health. Means and standard deviations are presented in Appendix H.

Continuing Education.

In examining whether formal continuing education was a factor in retirement preparation, an analysis of variance was run on participants and non-participants in continuing education. Participants had significantly higher mean scores than non-participants on the following retirement preparation indexes: Community Activity Behavior, F (1,196) = 12.8448, $p < .001$; Health Care Information, F (1, 196) = 5.0226, $p < .05$; Psychological Adjustment Information, F (1, 196) = 4.6034, $p < .05$; Retirement Zest Attitude, F (1, 196) = 10.0062, $p < .005$; Total Behavior, F (1, 196) = 13.9566, $p < .001$; Total Information, F (1, 196) = 6.7637, $p < .01$; Complete RPI, F (1, 196) = 10.9334, $p < .001$. Means and standard deviations are presented in Appendix I.

Proximity to Retirement.

Preretirees were grouped into three categories of proximity to retirement: less than 5 years, 5 to 9 years, 10 or more years. Two significant differences were seen among these groups on retirement preparation scores. Preretirees closest to retirement scored significantly higher on Financial Planning Behavior, F (2,167) = 5.1179, $p < .01$, as well as on Financial Planning Information, F (2, 167) = 3.4692, $p < .05$. For Financial Planning Behavior, the group with less than 5 years until retirement scored significantly higher than both of the other groups and on Financial Planning Information this group was significantly higher than preretirees in the 5 to 9 years from retirement category. Means and standard deviations are presented in Appendix J.

Retirement Decision.

No significant differences were found on any of the retirement preparation indexes among preretirees examined according to whether they would choose mandatory or voluntary retirement. Means and standard deviations are presented in Appendix K.

Discussion

Sex.

The studies exploring sex differences have generally focused on when men and women plan to retire (Patton, 1977) and the reasons behind it (Palmore, 1965). Although sex differences were seen, no evidence indicated why men and women approach retirement differently. The analysis of the Retirement Preparation Indexes in terms of sex showed two significant differences. Men were much more prepared in the area of Financial Planning Information. This indicates that men have a better understanding of how to figure out their net worth, of the financial changes to expect upon retirement, and of how to estimate their social security pension that they'll receive. If in most families it has been the male who has directed the finances, it is understandable that he would have more information on these issues. Analysis of women who are not married or are the head of the household might reveal less of a difference on this index since these women would have to deal with these same economic concerns.

In the Palmore study, he reports that over half the women retired did so in order to enjoy leisure activities. This may help in the understanding of why women were more prepared than men on Retirement Zest Attitude. A prepared person on this index views exercise acceptable for older people, sex as an activity that retirees are interested in, and retirement as a time when a great number of possibilities exist for activities. The concept to leisure certainly can be viewed within the scope of these areas. Women may view retirement, as Palmore suggests, as a time to look forward to since a number of leisure, non-work oriented activities can finally be realized.

Present Age.

There was no indication on any of the attitude indexes that retirement zest, optimism, or functional worth and capability were a function of age.

Lehr and Gernot (1969) report a change from a positive to a negative attitude toward retirement around the age of 60 for men. For the sample of pre-retirees in the present study no such change in attitude was observed. This may, however, be accounted for by the difference in instruments used to measure this dimension.

A number of studies indicate that preparation is positively correlated with an accepting attitude toward retirement (Ash, 1966; Lehr & Gernot, 1969; Patton, 1977). When examining preretirees according to age (50 to 54, 55 to 59, 60 or more) differences were seen on Financial Planning Information and the Total Information indexes. In both cases the older group had the highest level of preparation. This should not be misinterpreted to mean that the older person has a better financial base since no differences were seen on the Financial Planning Behavior Index among age groups. What we may be witnessing is the older preretiree's awareness that certain issues have to be looked into before retirement. This sample of persons may represent those who have waited until this late date to become aware of their financial situation. If this is so, it may be too late to do anything about it. Again, the higher score on Total Information may reflect an awareness of the basic health care, financial, and psychological issues facing the retiring person, but does not necessarily indicate any attempt at improving his situation.

Income.

Preretirees having the highest level of yearly income also had the highest level of Financial Planning Information. This finding is consistant with earlier research which suggests that having an adequate income is a key factor in having a positive outlook toward retirement (Glamser, 1976; Patton, 1977; Saleh & Otis, 1963). Although not statistically significant, there was the indication that persons with higher incomes also showed the most favorable attitudes toward retirement as measured by the Retirement Preparation Attitude

Indexes.

Examining the interaction of income level and retirement decision did not show the general trends which were previously reported. No relationship was found to indicate that preretirees who would choose early retirement and had a high income were any more prepared than other preretirees.

Occupational Status.

On four indexes, Financial Planning Information, Total Behavior, Total Information, and the Complete RPI, the managerial/professional group of classified preretirees had a greater level of retirement preparation than did the other occupational groups. This finding supports the Burgess et al. (1958) study which showed the greatest differences concerning attitudes and information about aging and retirement to be between the managerial and the manual worker groups. To echo this study's conclusions, the higher the occupational status, the better prepared the preretiree is for retirement and the better he is able to deal with the issues of aging. The higher level of preparation on the complete retirement preparation index indicates an overall ability to deal with financial, psychological, and behavioral concerns facing the preretiree. The higher occupational status group may also be the employees who have the greatest financial means to involve themselves in various community activities and to have made financial investments for their later years. Barfield et al. (1969) proposed that having a certain amount of income from one's assests is an important factor in the retirement decision. Such a realization would be most probable for the managerial/professional group.

The other significant difference among occupational groups occured on the Retirement Zest Attitude Index. On this scale, clerical workers were significantly higher than other blue-collar workers and skilled workers.

This category is almost exclusively made up of women. We see the same sex differences appearing as in the comparisons between men and women. The clerical worker views the post retirement years as full of potential to become involved in activities which weren't possible during the working years. Life satisfaction is not as attached to this job as it is for other occupations. Future research might provide support for Friedmann and Havighurst's (1954) contention that an inverse relationship exists between work attitude and anticipation of retirement for women in this occupational group.

Marital Status.

Little research has examined the variable marital status as to its importance in retirement planning. It is known, however, that older people who are married do report higher life satisfaction as well as have greater longevity (Bischof, 1976). Non-married persons in this study include those who are single, divorced, or widowed. This group was significantly more prepared in Community Activity Behavior, Psychological Adjustment Information, and Total Behavior. Rather than investing the time in the family unit, more involvement is seen in community and non-work organizations. Not only are primary social contacts made on the job, but a network of relationships has been established out in the community. For persons who have been very involved with the family unit, especially women, changing relationships may be expected with the loss of their spouse.

The higher score on Psychological Adjustment Information indicates that the non-married preretirees have already dealt with the issues of lonliness and boredom. The higher level of community involvement may indicate an attempt to deal with these psychological dilemmas.

Bischof states that non-married preretirees appear to avoid thinking about retirement if they feel it means loss of a position of value in society.

The current research indicates that it is necessary to realistically know what is in front of them before retirement comes. Economic planning and psychological adjustment are concerns which must be dealt with even if one's position in society is devalued upon transition.

Education.

Research on the effect the level of educational attainment has on how one adjusts to retirement has only been approached indirectly by way of examining specific occupations which have particular educational requirements (i.e., university teaching) or income levels which may reflect education. This study shows preretirees holding a college degree or better, to be significantly more prepared for retirement on the individual indexes Community Activity Behavior, Financial Planning Information, and Retirement Zest Attitude. They were also more prepared on the composite indexes Total Behavior, Total Information, and the Complete RPI. This discussion parallels that presented under income and occupational status. The preretiree at the high end on those two variables was also the one showing the largest degree of preparation. Persons with a college education may well be those with the largest annual income, thus demonstrating greater knowledge concerning financial matters. With both the education and the necessary income, they can become more active participants in community affairs (reflected by the higher CVB score). The Patton (1977) study proposes that academics would choose early retirement if they had the financial means to do so. The fact that college educated classified preretirees at OSU were significantly more prepared on Retirement Zest Attitude may be an indication that they too would favor this option.

One index showed persons with less than a high school education to be better prepared than college graduates - Functional Worth and Capability.

This may indicate that persons with the least amount of formal education are also those who have found another social network to which they tie their worth. They find meaning of their existence primarily away from the job setting which those with more education are unable to do. The high score on this index is primarily determined by not needing someone to push them in order to accomplish the things they want. The person with less education has set his goals away from work and knows how to carry out plans to accomplish them.

Health.

A subjective rating of health showed preretirees who reported excellent health to be more prepared on seven of the retirement indexes. Establishing a regular exercise program is the main determinant in scoring high on Health Maintenance Behavior. It's logical to expect that for persons with poorer health there would also be a smaller chance that they would be involved in regular exercise. As health declines so does exercise for this sample. Those with excellent health also were more prepared in the areas of Financial Planning Information, Retirement Zest Attitude, Total Behavior, Total Information, and the Complete RPI. The studies which address the issue of health suggest poor health would be a key reason for early retirement (Barfield et al., 1969; Patton, 1977; Streib & Schneider, 1971; Thompson & Streib, 1958). This research, however, reveals that the better the health of the preretiree, the better prepared the person is for a life-stage transition. We see the preretiree who is in excellent health, significantly more prepared on all of the composite indexes. So although it may be the person with poor health who has to retire early, it is those with better health who will make more out of the post retirement years.

Continuing Education.

The concept of life-long learning may have stronger implications when applied to other areas than realized. This study shows that persons who participate fromally in continuing education are generally more prepared for the life-stage transition of retirement. Participants are those who report taking community college courses, attending work and non-work related seminars and workshops, taking part in Extension or DCE education, etc. They are more prepared in the areas of Community Activity Behavior, Health Care Issues, Psychological Adjustment Information, Retirement Zest Attitude, Total Behavior, Total Information, and the Complete RPI. The person involved in life-long learning is also the one concerned about his own development regardless of age and maintaining his ability to meet the demands of a changing society. When retirement occurs, this person has already explored some of the options available to the retiree and is aware that many more also exist. The continuing emphasis on the role of education throughout the life-span may in the future be a key element in dealing with successful adjustment to retirement.

Proximity to Retirement.

Earlier studies have reported a shift toward a more negative attitude toward retirement as the event approaches (Ash, 1966; Atchely, 1976; Lehr & Gernot, 1969; Streib & Schneider, 1971). This age trend for men has been seen around the age of sixty. No such indication of increasing negative attitude was detected on any of the attitude indexes in this study. When examined according to their proximity to retirement, no significant differences were seen among the age groups on attitudinal measures. However, those closest to retirement were more prepared on Financial Planning Behavior and Financial Planning Information. Realizing that within a very few years there would be a dramatic change in income, economic issues and preparation

were being given more attention. As Thurner (1974) suggest, those involved in planning economic affairs are often the ones to mention travel plans and leisure activities.

Retirement Decision.

Whether one decides to retire mandatorily or voluntarily made no difference in level of retirement preparation. The logical assumption that the voluntary retiree would be higher on certain financial and attitude indexes is not supported by this research. What we might be experiencing with this sample is a very heterogeneous group of preretirees. The reasons for choosing voluntary retirement differ as much as do their level of preparation thus causing no difference to be seen. Future analysis of retirement decision according to occupational status, income level, and education may clarify this point.

Characteristics of the Sample

Sample size: 206 classified employees at Oregon State University

Sex:	Men	Women
	78 (38%)	128 (62%)

Age:	50 to 54	55 to 59	60 or more
	70 (34%)	84 (41%)	50 (25%)

Income Level:
Less than $10,000/year - 45 (23%)
Between $10,000 and $20,000/year - 88 (44%)
More than $20,000/year - 65 (33%)

Occupational Status:
Managerial/Professional - 21 (11%)
Skilled Workers - 46 (25%)
Clerical - 74 (40%)
Other Blue-Collar Workers - 44 (24%)

Marital Status:	Married	Not married
	147 (72%)	58 (28%)

Education:
Less than high school - 29 (14%)
High School graduate - 62 (31%)
Some college - 86 (43%)
College Graduates - 25 (12%)

Health:	Fair	Good	Excellent
	34 (17%)	116 (58%)	51 (25%)

Continuing Education:

Participant	Non-participant
46 (23%)	152 (77%)

Proximity to Retirement:

Less than 5 years - 64 (38%)
5 to 9 years - 60 (35%)
10 years or more - 46 (27%)

Retirement Decision:

Mandatory - 68 (35%)
Voluntary - 127 (65%)

BIBLIOGRAPHY

Ash, P. Preretirement counseling. The Gerontologist, 1966, 6, 97-127.

Atchley, R.C. The sociology of retirement. New York: Schenkman Plublishing Company, 1976.

Barfield, R., Katona, G., & Morgan, J. Early retirement: The decision and the experience. Ann Arbor, Michigan: Institute of Social Research, University of Michigan, 1969.

Bischof, L.J. Adult psychology (2nd ed.). New York: Harper & Row, Pub., 1976.

Burgess, E.W., Corey, L.G., Pineo, P.C., & Thornbury, R.T. Occupational differences in attitudes toward aging and retirement. Journal of Gerontology, 1958, 13, 203-206.

Friedmann, E.A., & Havighurst, R,J. The meaning of work and retirement. Chicago: University of Chicago Press, 1954.

Glamser, F.D. Determinants of a positive attitude toward retirement. Journal of Gerontology, 1976, 31, 104-107.

Lehr, U., & Gernot, D. Determinants of attitudes toward retirement. In R.J. Havighurst (Ed.), Adjustment to retirement: A cross-national study. Assen, Netherlands: Van Gorcum, 1969.

Palmore, E.B. Differences in the retirement patterns of men and women. The Gerontologist, 1965, 5, 4-8.

Patton, C.V. Early retirement in academia: Making the decision. The Gerontologist, 1977, 17, 347-354.

Saleh, S.D., & Otis, J.L. Sources of job satisfaction and their effects on attitudes toward retirement. Journal of Industrial Psychology, 1963, 1, 101-106.

Streib, G.F., & Schneider, C.J. Retirement in american society: Impact and progress. Ithaca, New York: Cornell University, 1971.

Thompson, W.E., & Streib, G.F. Situational determinants: Health and economic deprivation in retirement. Journal of Social Issues, 1958, 14, 18-34.

Thurnher, M. Goals, values, and life evaluations at the preretirement stage. Journal of Gerontology, 1974, 29, 85-96.

Tiberi, D.M., & Boyack, V.L. A comparitive analysis of four preretirement education models. Submitted for publication, 1977.

APPENDIX C-3

Project:
A Research Study of Retirement Preparation Programs
Grant No. 5 R01 MH 23949
National Institute of Mental Health
Grantee Institution:
University of Oregon
College of Health, Physical Education, and Recreation
University of Oregon Center for Gerontology
Principal Investigator: Frances G. Scott, PhD.
Project Director: James H. Lynch, PhD.

Data Collection Instruments:

1 - Pre-test Questionnaire

2 - Post-test Summative Evaluation Form

3 - Post-test (3-month) Questionnaire

Research Study of Retirement Preparation Programs

Center for Gerontology
1627 Agate Street

College of Health, Physical
Education and Recreation
UNIVERSITY OF OREGON
Eugene, Oregon 97403

503/686-4201

DATE _____

RETIREMENT PREPARATION PROGRAMS QUESTIONNAIRE

Please establish your personal identification CODE here, by entering:

The initials of your mother's maiden name ____ ____ ____

AND the month of her birth _____

1. What do you think you will like most about retirement?

_____

_____

2. What do you think you will like least about retirement?

_____

_____

3. We are interested in how much you know about things related to retirement. Please indicate the extent of your knowledge by circling the appropriate number in each case below. (This is not a test, so please be frank.)

RESPONSES

1 No knowledge
2 A little knowledge
3 Some knowledge
4 Knowledgeable
5 Very knowledgeable

1 2 3 4 5 The difference between Medicare medical and Medicare hospital insurance.

1 2 3 4 5 How to deal with loneliness.

1 2 3 4 5 The problems associated with being widowed.

1 2 3 4 5 The physical changes in my body as I grow older.

an equal opportunity/affirmative action employer

3. (continue as on previous page)

RESPONSES

1 No knowledge
2 A little knowledge
3 Some knowledge
4 Knowledgeable
5 Very knowledgeable

1 2 3 4 5 What services my Medicare medical insurance will pay for.

1 2 3 4 5 Changes to expect in my marriage when I retire.

1 2 3 4 5 Employment opportunities for the retired.

1 2 3 4 5 What services my Medicare hospital insurance will pay for.

1 2 3 4 5 How to deal with boredom.

1 2 3 4 5 What to expect if I decide to live with my children.

1 2 3 4 5 How much money I can earn in retirement without losing any Social Security benefits.

1 2 3 4 5 The differences between Medicare and Medicaid.

1 2 3 4 5 The changing sexual needs of my spouse as he or she grows older.

1 2 3 4 5 How to estimate the amount of Social Security I will receive.

1 2 3 4 5 Where to find help in coping with problems I may face in later years.

1 2 3 4 5 Health problems which aging people may commonly have.

1 2 3 4 5 My own changing sexual needs as I grow older.

1 2 3 4 5 The changes to expect in my income upon retirement.

1 2 3 4 5 How to figure my net worth upon retirement.

4. Do you regard yourself as living in a:

1_____Metropolitan city or suburban area
2_____Smaller city
3_____Small town or countryside
4_____Other: (specify) _____

NOTE: Please enter the name of the town, city or other postal location in which you live:

_____

5. People have differing opinions regarding aging and retirement. Please indicate the extent to which <u>you</u> agree or disagree with the following statements by <u>circling</u> the appropriate number in each case.

RESPONSES

1 Strongly agree
2 Agree
3 Undecided
4 Disagree
5 Strongly disagree

1 2 3 4 5 Older people are valuable because of their experience.

1 2 3 4 5 Retired people are generally more lonely than non-retired people.

1 2 3 4 5 Older people tend to be more like one another than do younger people.

1 2 3 4 5 Older people are just as useful to society as younger people.

1 2 3 4 5 In general, a person's health typically gets worse after he or she retires.

1 2 3 4 5 I expect retirement to be the best years of my life.

1 2 3 4 5 Older people shouldn't exercise when they don't have to.

1 2 3 4 5 Sex is something that retired people are generally not interested in.

1 2 3 4 5 Most older people prefer not to get involved in community affairs.

1 2 3 4 5 Retirement means not doing much of anything.

1 2 3 4 5 The more education a person has, the better he or she can plan for retirement.

6. What is the title of your job?

_____

7. Please describe as carefully as possible the work that you do.

_____

_____

_____

_____

8. Below are some statements concerning how people feel about aging and retirement. Please indicate how much the following statements are <u>like</u> <u>you</u> by circling the appropriate number in each case.

RESPONSES

1 Very much like me
2 Generally like me
3 Undecided
4 Generally not like me
5 Not like me at all

1 2 3 4 5 Lately I have been feeling useless.

1 2 3 4 5 I need somebody to push me in order to accomplish the things I want.

1 2 3 4 5 I am looking forward to my retirement.

1 2 3 4 5 The thought of growing old scares me.

1 2 3 4 5 I feel that things are getting better as I grow older.

1 2 3 4 5 When I think of retirement I get depressed.

1 2 3 4 5 No amount of preparation will change the fact that retirement has some fearful aspects.

9. Please estimate your last year's income before taxes (include spouse's income if applicable).

1_____	Up to $5,000	4_____	$15,000-$20,000
2_____	$5,000-$10,000	5_____	$20,000-$25,000
3_____	$10,000-$15,000	6_____	Over $25,000

10. Pre-retirees in general mention various factors as potential problems about which they are concerned. We are interested in the extent to which <u>you</u> see the following factors as possible problems in retirement. Please indicate the degree of your concern by <u>circling</u> the appropriate number in each case.

RESPONSES

1 No concern at all
2 Perhaps a little concern
3 Undecided
4 Concerned
5 Very concerned

1 2 3 4 5 Boredom

1 2 3 4 5 Living arrangements and housing

1 2 3 4 5 Feelings of worthlessness

1 2 3 4 5 Health

1 2 3 4 5 Finances and standard of living

10. (continue as on previous page)

RESPONSES

1 No concern at all
2 Perhaps a little concern
3 Undecided
4 Concerned
5 Very concerned

1 2 3 4 5 Marital relationship

1 2 3 4 5 Loneliness

1 2 3 4 5 Loss of work relationships

1 2 3 4 5 Death and bereavement

1 2 3 4 5 Legal affairs in poor shape

1 2 3 4 5 Inflation

1 2 3 4 5 Lack of a routine

Other (please enter below)

1 2 3 4 5 _____

1 2 3 4 5 _____

1 2 3 4 5 _____

11. Do you participate in any community or other non-work related organizations?

1_____No 2_____Yes

(12) IF YES, how many such organizations do you participate in? _____

(13) How active are you in those organizations?

1_____Not very active
2_____Somewhat active
3_____Active
4_____Very active

14. About how many hours per week do you spend participating in volunteer activities?

1_____None
2_____1-2
3_____3-4
4_____5-9
5_____10-20
6_____20 or more

15. What is the condition of your health?

1_____Poor 2_____Fair 3_____Good 4_____Excellent

16. Do you follow any type of regular exercise program?

1_____No 2_____Yes

17. How often do you exercise?

1_____I do not exercise
2_____About once a month
3_____About once a week
4_____Several times a week
5_____Everyday

18. About how often do you and your partner spend time alone with each other?

0_____Not applicable
1_____Hardly ever
2_____About once a month
3_____A few times a month
4_____About once a week
5_____A few times a week
6_____About once a day
7_____A few times everyday
8_____Many times everyday

19. About how often do you and your partner participate in social or leisure activities (such as playing tennis, going to the movies, bowling, etc.)?

0_____Not applicable
1_____Hardly ever
2_____A couple times a month
3_____About once a week
4_____A few times a week

20. Have you done any of the following? (Please check as many as apply.)

_____Read books on pre-retirement planning
_____Experimented with living on a retirement budget
_____Outlined a plan on how to spend my leisure time
_____Read articles on retirement planning
_____Figured out my net worth
_____Estimated my Social Security in retirement
_____Made out a will
_____Talked with a retirement counselor
_____Other (Please specify)_____

21. What is your ethnic background?

1_____American Indian
2_____Black/Afro-American
3_____Caucasian/White
4_____Chicano/Mexican-American
5_____Other Spanish-speaking
6_____Oriental/Asian-American
7_____Other (please specify)_____

22. What is the highest level of education that you have?

1_____Grade school
2_____Some high school
3_____High school graduate
4_____Some college
5_____College graduate (BA-BS)
6_____Some graduate or professional school (Masters)
7_____Higher graduate degree (Ph.D., Ed.D., etc.)
8_____Higher professional degree (M.D., J.D., etc.)

23. What is your sex? 1_____Male 2_____Female

24. What was your age on your last birthday? _____

25. Is your attendance at this program related primarily to:

1_____Your own retirement
2_____Your spouse's retirement
3_____Other: (specify)_____

NOTE: If you checked #1, answer the following questions; others may proceed ahead to question number 30.

(26) When do you plan to retire? Year_____

(27) At what age do you plan to retire?_____

(28) Do you expect: 1_____Mandatory retirement
2_____Voluntary retirement

(29) How many years have you worked for your employer?_____

30. Apart from Social Security, will you or your spouse retire with some kind of <u>regular</u> income from a work-related benefits program (such as from a pension, retirement annuity/investment plan, employer stock package, etc.)?

1_____No 2_____Yes

31. Apart from this program, have you sought help in planning your retirement? 1_____No 2_____Yes

(32) IF YES, in what areas and from whom? (Check as many as apply.)

____Financial planning ____Accountant
____Health insurance ____Lawyer
____Legal affairs ____Spouse
____Other: (specify)_____

33. What is your marital status?

1_____Married
2_____Separated
3_____Divorced
4_____Widowed
5_____Never Married

(34) IF MARRIED, is your spouse also attending the program?

1_____No 2_____Yes

35. Have you signed your INFORMED CONSENT form, agreeing to furnish the foregoing information for the retirement research study?

1_____No 2_____Yes

36. Please verify your personal CODE by entering:

The initials of your mother's maiden name____ ____ ____

AND the month of her birth_____

THANK YOU VERY MUCH FOR YOUR PARTICIPATION

Research Study of Retirement Preparation Programs

Center for Gerontology
1627 Agate Street

College of Health, Physical Education and Recreation
UNIVERSITY OF OREGON
Eugene, Oregon 97403

503/686-4201

DATE_____

DEAR PROGRAM PARTICIPANT:

We will appreciate your help in evaluating the program you have attended. What follows is a brief questionnaire that will help us understand such programs better. Please complete the questionnaire carefully.

Please repeat your personal identification code here, by entering:

The initials of your mother's maiden name_____ _____ _____

AND the month of her birth_____

1. How did you feel about the setting and the program presenters? Between each pair of words, mark (X) the space that is closest to your feelings.

THE ROOM WAS:

Pleasant	___ ___ ___ ___ ___ ___ ___	Unpleasant
Uncomfortable	___ ___ ___ ___ ___ ___ ___	Comfortable
Distracting	___ ___ ___ ___ ___ ___ ___	Not distracting

IN GENERAL, THE PROGRAM PRESENTERS WERE:

Enthusiastic	___ ___ ___ ___ ___ ___ ___	Matter-of-fact
Interesting	___ ___ ___ ___ ___ ___ ___	Dull
Disorganized	___ ___ ___ ___ ___ ___ ___	Well organized
Opinionated	___ ___ ___ ___ ___ ___ ___	Objective
Knew material	___ ___ ___ ___ ___ ___ ___	Didn't know material
Warm	___ ___ ___ ___ ___ ___ ___	Cold
Unprepared	___ ___ ___ ___ ___ ___ ___	Well prepared
Personally involved	___ ___ ___ ___ ___ ___ ___	Detached
Able to stimulate participation	___ ___ ___ ___ ___ ___ ___	Not able to stimulate participation

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2. Below is a list of ways information may have been presented or developed in your program. Please check those categories that apply to your program, and indicate how much you liked each method you have checked. On the right, mark the space closest to your feelings.

Check on left each method used in your program.		LIKED VERY MUCH						DISLIKED VERY MUCH
___	Movies & video tape	___	___	___	___	___	___	___
___	Instructor commentary	___	___	___	___	___	___	___
___	Audio-tape presentations	___	___	___	___	___	___	___
___	Small-group discussion	___	___	___	___	___	___	___
___	Small-group exercises	___	___	___	___	___	___	___
___	Reading materials	___	___	___	___	___	___	___
___	Guest presenters	___	___	___	___	___	___	___
___	Planning materials such as budget forms, etc.	___	___	___	___	___	___	___
___	Reports from other small groups in workshop	___	___	___	___	___	___	___
___	Individual paper and pencil exercises	___	___	___	___	___	___	___

3. To what extent did the program influence your . . . . . .

	A GREAT DEAL						NOT AT ALL
Attitude towards retirement	___	___	___	___	___	___	___
Plans for retirement	___	___	___	___	___	___	___
Current activities	___	___	___	___	___	___	___

4. How satisfied were you with the program you attended?

1_____Very dissatisfied
2_____Dissatisfied
3_____Neither satisfied nor dissatisfied
4_____Satisfied
5_____Very satisfied

5. Would you recommend the program you attended?

1_____No 2_____Yes

6. How much would you pay to enroll in the program in which you participated? _____$

7. How would you improve the pre-retirement program you attended?

_____

_____

_____

8. In your opinion what do you feel is the most important area to cover in a pre-retirement education program?

_____

_____

_____

9. In your opinion how adequately do you think the program covered the following topics? Please indicate your response by circling the number that comes closest to your opinion.

RESPONSES

0 Did not cover
1 Very inadequately
2 Inadequately
3 Adequately
4 Very adequately

0	1	2	3	4	Middle age issues
0	1	2	3	4	Leisure time activities
0	1	2	3	4	Estate planning
0	1	2	3	4	Employment opportunities available for older adults
0	1	2	3	4	Resources and services
0	1	2	3	4	Volunteer opportunities
0	1	2	3	4	Mental health
0	1	2	3	4	Family budgeting
0	1	2	3	4	Types of retirement housing
0	1	2	3	4	Social Security
0	1	2	3	4	The role of the older person in society
0	1	2	3	4	Financial planning
0	1	2	3	4	The aging process
0	1	2	3	4	Medicare/Medicaid
0	1	2	3	4	Being an intelligent consumer

9. (continue as on previous page)

RESPONSES

0 Did not cover
1 Very inadequately
2 Inadequately
3 Adequately
4 Very adequately

0 1 2 3 4	How to maintain good physical health
0 1 2 3 4	Choosing a place to live in retirement
0 1 2 3 4	Tax information
0 1 2 3 4	Emotional problems faced by older persons
0 1 2 3 4	How to make plans
0 1 2 3 4	Marital relationships
0 1 2 3 4	Available adult education programs
0 1 2 3 4	Widowhood
0 1 2 3 4	Retirement pensions, annuities, and benefits
0 1 2 3 4	Sexuality during the later years
0 1 2 3 4	Nutrition
0 1 2 3 4	The single older person
0 1 2 3 4	Death and dying
0 1 2 3 4	Family and social relationships
0 1 2 3 4	Stress and tension
0 1 2 3 4	Exercise
0 1 2 3 4	Living arrangements

10. What did you like most about the program you attended?

_____

_____

_____

11. What did you like least about the program you attended?

_____

_____

_____

THANK YOU FOR YOUR COOPERATION

Research Study of Retirement Preparation Programs

Center for Gerontology
1627 Agate Street

College of Health, Physical
Education and Recreation
UNIVERSITY OF OREGON
Eugene, Oregon 97403

503/686-4201

DATE _____

RETIREMENT PREPARATION PROGRAMS QUESTIONNAIRE

Please repeat your personal identification CODE here, by entering:

The initials of your mother's maiden name ____ ____ ____

AND the month of her birth _____ _____

1. What is the first word that comes to mind when you think of retirement?

_____

2. We are interested in how much you know about things related to retirement. Please indicate the extent of your knowledge by circling the appropriate number in each case below. (This is not a test, so please be frank.)

RESPONSES

1 No knowledge
2 A little knowledge
3 Some knowledge
4 Knowledgeable
5 Very knowledgeable

1 2 3 4 5 The differences between Medicare medical and Medicare hospital insurance.

1 2 3 4 5 How to deal with loneliness.

1 2 3 4 5 The problems associated with being widowed.

1 2 3 4 5 The physical changes in my body as I grow older.

1 2 3 4 5 What services my Medicare medical insurance will pay for.

1 2 3 4 5 Changes to expect in my marriage when I retire.

1 2 3 4 5 Employment opportunities for the retired.

1 2 3 4 5 What services my Medicare hospital insurance will pay for.

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2. (continue as on previous page)

RESPONSES

1 No knowledge
2 A little knowledge
3 Some knowledge
4 Knowledgeable
5 Very knowledgeable

1 2 3 4 5 How to deal with boredom.

1 2 3 4 5 What to expect if I decide to live with my children.

1 2 3 4 5 How much money I can earn in retirement without losing any Social Secruity benefits.

1 2 3 4 5 The differences between Medicare and Medicaid.

1 2 3 4 5 The changing sexual needs of my spouse as he or she grows older.

1 2 3 4 5 How to estimate the amount of Social Security I will receive.

1 2 3 4 5 Where to find help in coping with problems I may face in my later years.

1 2 3 4 5 Health problems which aging people may commonly have.

1 2 3 4 5 My own changing sexual needs as I grow older.

1 2 3 4 5 The changes to expect in my income upon retirement.

1 2 3 4 5 How to figure my net worth upon retirement.

3. People have differing opinions regarding aging and retirement. Please indicate the extent to which <u>you</u> agree or disagree with the following statements by <u>circling</u> the appropriate number in each case.

RESPONSES

1 Strongly agree
2 Agree
3 Undecided
4 Disagree
5 Strongly disagree

1 2 3 4 5 Older people are valuable because of their experience.

1 2 3 4 5 Retired people are generally more lonely than non-retired people.

1 2 3 4 5 Older people tend to be more like one another than do younger people.

3. (continue as on previous page)

RESPONSES

1 Strongly agree
2 Agree
3 Undecided
4 Disagree
5 Strongly disagree

1 2 3 4 5 Older people are just as useful to society as younger people.

1 2 3 4 5 In general, a person's health typically gets worse after he or she retires.

1 2 3 4 5 I expect retirement to be the best years of my life.

1 2 3 4 5 Older people shouldn't exercise when they don't have to.

1 2 3 4 5 Sex is something that retired people are generally not interested in.

1 2 3 4 5 Most older people prefer not to get involved in community affairs.

1 2 3 4 5 Retirement means not doing much of anything.

1 2 3 4 5 The more education a person has, the better he or she can plan for retirement.

4. Below are some statements concerning how people feel about aging and retirement. Please indicate how much the following statements are <u>like you</u> by circling the appropriate number in each case.

RESPONSES

1 Very much like me
2 Generally like me
3 Undecided
4 Generally not like me
5 Not like me at all

1 2 3 4 5 Lately I have been feeling useless.

1 2 3 4 5 I need somebody to push me in order to accomplish the things I want.

1 2 3 4 5 I am looking forward to my retirement.

1 2 3 4 5 The thought of growing old scares me.

1 2 3 4 5 I feel that things are getting better as I grow older.

1 2 3 4 5 When I think of retirement I get depressed.

1 2 3 4 5 No amount of preparation will change the fact that retirement has some fearful aspects.

5. Apart from this program, have you sought help in planning your retirement?

1 ____No 2 ____Yes

(6) IF YES, in what areas and from whom? (Check as many as apply.)

____Financial planning
____Health insurance
____Legal affairs
____Accountant
____Lawyer
____Spouse
____Other: (specify)_____

7. Do you participate in any community or other non-work related organizations?

1 ____No 2 ____Yes

(8) IF YES, how many such organizations do you participate in? _____

(9) How active are you in those organizations?

1_____Not very active
2_____Somewhat active
3_____Active
4_____Very active

10. About how many hours per week do you spend participating in volunteer activities?

1_____None
2_____1-2
3_____3-4
4_____5-9
5_____10-20
6_____20 or more

11. Do you follow any type of regular exercise program?

1_____No 2_____Yes

12. How often do you exercise?

1_____I do not exercise
2_____About once a month
3_____About once a week
4_____Several times a week
5_____Everyday

13. Have you done any of the following? (Please check as many as apply.)

_____Read books on pre-retirement planning
_____Experimented with living on a retirement budget
_____Outlined a plan on how to spend my leisure time
_____Read articles on retirement planning
_____Figured out my net worth
_____Estimated my Social Security in retirement
_____Made out a will
_____Talked with a retirement counselor
_____Other (Please specify)_____

14. About how often do you and your partner spend time alone with each other?

0_____Not applicable
1_____Hardly ever
2_____About once a month
3_____A few times a month
4_____About once a week
5_____A few times a week
6_____About once a day
7_____A few times everyday
8_____Many times everyday

15. About how often do you and your partner participate in social or leisure activities (such as playing tennis, going to the movies, bowling, etc.)?

0_____Not applicable
1_____Hardly ever
2_____A couple times a month
3_____About once a week
4_____A few times a week

16. What is your marital status?

1_____Married
2_____Separated
3_____Divorced
4_____Widowed
5_____Never married

(17) IF MARRIED, did your spouse attend the program with you?

1_____No 2_____Yes

18. Apart from Social Security, will you or your spouse retire with some kind of regular income from a work-related benefits program (such as from a pension, retirement annuity/investment plan, employer stock package, etc.)?

1_____No 2_____Yes

19. Have you decided when to retire?

1_____No 2_____Yes

20. Were you able to attend most or all of the sessions in your program?

1_____No 2_____Yes

21. Please verify your personal CODE by entering:

The initials of your mother's maiden name ____ ____ ____

AND the month of her birth _____

THANK YOU FOR YOUR CONTRIBUTION

TO THIS STUDY.

Summary Statement on Dissemination of Findings

Dissemination of findings is observed along several, clearly differentiated lines: (1) research reports of conclusions drawn from hypotheses-testing and methodological development; (2) theoretical papers and practical applications (such as training materials) related to the educational methods (treatments) at issue; (3) reports from related investigations inspired wholly or in part by the project at hand; and (4) miscellaneous professional activities.

Research Reports. The following papers are under preparation:

Lynch, J., D. McKenzie, S. Bettis, T. Straugh, and F. Scott. Three educational methodologies in pre-retirement planning programs: A study of relative effectiveness (planned journal article).

Straugh, T., J. Lynch, C. Owen, W. Price, D. Tiberi, and F. Scott. The "Retirement Preparation Indexes": Re-analysis of the original nine factors (planned journal article).

Lynch, J. H. Patterns of pre-retirees' concerns (planned journal article).

(Staff) Final Report to Grantor. Research Study of Retirement Preparation Programs, Project Number 5-R01-MH23949, National Institute of Mental Health (USDHEW:Public Health Service).

Theoretical Papers and Practial Applications. The following materials have been accepted for publication or otherwise disseminated:

Lynch, J. H. Pre-retirement education: Issues in nomenclature and methodology. Educational Gerontology, in press.

Lynch, J. H. Developmental education for retirement. In R. Beiser (ed.), Work, Leisure and Retirement, monograph of the 1977 Congress of the World Federation for Mental Health, in press.

Manion, U. V., and J. H. Lynch. In-Career Planning for Retirement: An Integrated Reading-Discussion Workshop. Denton, Texas: Prepared for the Office of the Governor, State of Texas, in cooperation with the North Texas State University Center for Community Services, January, 1978.

Lynch, J. H. Two Models for Pre-Retirement Education. Eugene, Oregon: The University of Oregon Center for Gerontology, March, 1978.

Lynch, J. H., and B. G. Riddell. Pre-Retirement Education: A Multi-Group Discussion Approach. Vancouver, Canada: The University of British Columbia, Centre for Continuing Education, February, 1979.

Scott, Frances G. "Orientation to Andragogy: Learning by Experience and Involvement." In F. G. Scott, J. Ewing, and D. M. McKenzie, Life Centered Funeral Services, Portland, Oregon: Uniservice Corporation, July, 1974.

Meyer, Sheldon L. Andragogy and the aging adult learner. Educational Gerontology, 2,2(April-June):115:122, 1977.

(Staff) A Training Manual for Pre-Retirement Educators. Eugene, Oregon: The University of Oregon Center for Gerontology, January, 1976.

(Film) "Positive Pre-Retirement Planning: A Teaching Model" (16mm, 27 min., color/sound). Eugene, Oregon: Maddron and Maddron (producers), 1977.

(Film) "Retire? Who? Me?" (16mm, 31 min., color/sound). Eugene, Oregon. Maddron and Maddron (producers and distributors), 1976.

Related Studies. Aspects of the following doctoral dissertation and masters thesis studies were stimulated directly by the RSRPP investigation, and the resulting work will advance the knowledge about questions raised by the present study.

Owen, Charles S. An Evaluation of A Short-Term Preretirement Education Program Using Measurement of Change (doctoral dissertation). Eugene, Oregon: University of Oregon, College of Education, June, 1979.

Price, William F. Personal Value Orientations and Selected Demographic Variables as Predictors of Retirement Preparation among Preretirees (doctoral dissertation). Corvallis, Oregon: Oregon State University, School of Education, July, 1978.

Kiekel, Beverlene. A Retirement Planning Manual Designed for Church Group Use (interdisciplinary masters degree terminal project). Eugene, Oregon: University of Oregon, Graduate School, December, 1977.

Miscellaneous Dissemination. Remarks here summarize activities in reference to various, usual channels available to the professional, as follows:

(1) Other Universities: The project director has contributed to training programs for potential pre-retirement educators at the University of Southern California, North Texas State University, the University of British Columbia and the University of Calgary. Practical findings disseminated in this way continue to inspire programming at these institutions.

(2) Professional Organizations: The project director has served as chairperson for pre-retirement education for the Western Gerontological Society (Annual Meeting) in 1977 and 1979. He has served similarly for the Canadian Association on Gerontology (Educational Meeting) in 1976. For the 1977 Congress of the World Federation for Mental Health, the director presented a major experiential demonstration of educational method in pre-retirement education.

(3) Community at Large: In the study area (HEW Region X), project staff, as faculty of the University of Oregon Center for Gerontology, make numerous formal and informal appearances in educational, community-service, and employment settings, in reference to the subjects of retirement and pre-retirement education.

(4) Activities of Trainees: Those individuals who carried out the 43 experimental programs throughout the study area now become transmitters of practical findings, via their continued programming in their respective settings. One result of the training intervention has appeared as an informal network of mutual, professional interest, along which information is passed among practitioners in the field. Certainly, the project at hand has been the singly most widespread and visible training intervention in the designated subject-matter within the study area (HEW Region X).